Reference Guide

Wyse® Winterm™ 9 series
Based on Microsoft® Windows® XP Embedded

Issue: 063005
PN: 883808-02 Rev. A

WYSE

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FCC Statement

This equipment has been tested and found to comply with the limits for either Class A or Class B digital devices (refer to "Thin Client Requirements Compliance"), pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution

Changes or modifications not covered in this manual must be approved in writing by the manufacturer's Regulatory Engineering department. Changes or modifications made without written approval may void the user's authority to operate the equipment.

Thin Client Requirements Compliance

FCC Compliance

The Models 9450XE, 9455XL, 9650XE, Model J400, Product 941GXL, Model x150SE, Product 9150SE, SX0, and VX0 Thin Clients meet Class B requirements.

IEC/EN Compliance

The Models 9450XE, 9455XL, 9650XE, Model J400, Product 941GXL, Model x150SE, Product 9150SE, SX0, and VX0 Thin Clients meet Class B requirements.

Canadian DOC Notices

Refer to the previous section, "Thin Client Requirements Compliance," to find out to which Thin Client model each of the statements below refers.

Class A

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Réglement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Class B

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Réglement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

IEC/EN Notice

These products conform to the requirements of IEC950 and EN60950.

These products conform to requirements of EN55022 for Class A equipment or EN55022 for Class B equipment (refer to "Thin Client Requirements Compliance").

Cable Notice

The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may cause interference and violate FCC and international regulations for electromagnetic interference.

Noise Suppressor

A noise suppressor (ferrite bead) must be installed on the network cable of your Thin Client. This installation is necessary to maintain compliance with U.S. FCC B limits and European CISPR B EN55022 Class B limits. The noise suppressor is supplied by the manufacturer and is packed in your Thin Client shipping carton.

Device Power Supply

Caution

Replace power supply with the same or equivalent type as recommended by the manufacturer.

Model 9450XE and 9455XL Thin Clients

For use with External Power Supply Li Shin Model LSE9802A1255 or certified equivalent model supplied by the manufacturer, rated 12V/4.58A.

Model 9650XE Thin Client

For use with External Power Supply Li Shin Model LSE0219B1280 or certified equivalent model supplied by the manufacturer, rated +12V/6.67A.

Model J400, Product 941GXL Thin Client

For use with External Power Supply Li Shin Model LSE9802A1255 or certified equivalent model supplied by the manufacturer, rated +12V/4.58A.

Model x150SE, Product 9150SE Thin Client

For use with External Power Supply DVE Model DSA-0421S-12 3 30, or certified equivalent model supplied by the manufacturer, rated 12V/2.5A.

Model SX0 Thin Client

For use with External Power Supply DVE Model DSA-0421S-12 3 30, or certified equivalent model supplied by the manufacturer, rated 12V/2.5A.

Model VX0 Thin Client

For Use with External Power Supply Model LSE9802A1255, or UL Listed Power Unit marked “Class 2” or “LPS” and rated for minimum 4.0A at 12 V DC.

Battery Information

The 9450XE, 9455XL, 9650XE, Model J400, Product 941GXL, and VX0 Thin Clients contain a replaceable battery.

Warning

There is a risk of explosion if the battery is replaced by an incorrect type. Always dispose of used batteries according to the instructions accompanying the battery.

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Wyse® Winterm™ 9 series Based on Microsoft® Windows® XP Embedded Reference Guide

Introduction

Winterm™ 9 series Thin Clients use the Windows™ XP embedded (XPe) operating system. These thin clients provide access to applications, files, and network resources made available on machines hosting Citrix™ ICA and Microsoft™ RDP session services. The keyboard, mouse, audio/video, and display data are transmitted over the network between the thin clients and session servers.

Thin client emulation software is installed locally by default. Other locally installed software permits remote administration of the thin clients and provides local maintenance functions.

Winterm™ 9 series Thin Clients currently include the Models 9450XE, 9455XL, 9650XE, Model J400, Product 941GXL, Model x150, Product 9150SE, Model SX0, Product S90, and Model VX0, Product V90.

The latest Wyse™ firmware version release for the 9450XE, 9455XL, 9650XE, Model J400, Product 941GXL, Model x150, Product 9150SE, Model SX0, Product S90, and Model VX0, Product V90 is based on the Microsoft XPe SP2 release.

About This Guide

This reference guide supplements the standard Windows XP and Windows XPe documentation supplied by Microsoft Corporation. The guide explains the differences, enhancements, and additional features provided by Wyse with the thin client. It does not attempt to describe the standard features found in Windows XP and Windows XPe.

XPe help can be accessed from the Microsoft Help and Support Web site at: http://support.microsoft.com/default.aspx.

Wyse Technical Support

To access Wyse technical resources, visit AskWyse.com. If you still have questions, you can submit your questions using the Wyse Support Request Form, or call Customer Support at 1-800-800-WYSE (toll free in U.S. and Canada). Hours of operation are from 7:00 am to 7:00 pm CST, Monday through Friday.

To access international support, visit http://www.wyse.com/worldwide.

Server Environment Requirements

The thin client uses a variety of services accessed through the network. These include session and product support services as well as standard network services such as DHCP and DNS. Services described in “Session Servers” and “Support Servers” are required.

Session Servers

Any one of the following services must be available on the network to which your thin client is connected:

- “Citrix Independent Computing Architecture (ICA)”
- “Microsoft Remote Desktop Protocol (RDP)”
- “Terminal Emulation Support”

Citrix Independent Computing Architecture (ICA)

ICA servers and published applications can be made available on the network using either of the following services:

- Windows™ 2000 Server with Terminal Services and one of the following installed:
  - Citrix™ MetaFrame 1.8 (alone or with Service Pack 2 and FR1 or Service Pack 3 and FR1)
  - Citrix™ MetaFrame XP
- Windows™ 2003 Server with Terminal Services and one of the following installed:
  - Citrix™ MetaFrame XP FR3
  - MetaFrame Presentation Server 3.0
- Windows™ NT 4.0 Terminal Server Edition with Citrix MetaFrame 1.8 installed.

Microsoft Remote Desktop Protocol (RDP)

RDP services are accessed by the Terminal Services Client application on the thin client. RDP can be made available on the network using any of the following services:

- Windows 2000 Server with Terminal Services installed
- Windows NT 4.0 Terminal Server Edition
- Windows XP Professional (Only one user can be logged in at a time)
- Windows Server 2003

Terminal Emulation Support

Third-party terminal emulation software can be installed on the thin client to support computing on legacy platforms. Access to accounts on these machines is the responsibility of the thin client user. The terminal emulation software uses the Telnet protocol to communicate with the computing platform.

Support Servers

The following services are required:

- “Rapport Remote Administration”
- “Virtual Network Computing (VNC) Viewer”

Rapport Remote Administration

You must install Wyse Rapport® version 4.4.x (installed on Windows XP Pro Workstation or Windows 2000 Server, Advanced Server or Workstation), and be able to access a software repository for your thin client (for information on installing Rapport and configuring the server environment, refer to the Rapport Quick Start Guide or Wyse Rapport Help File).

Rapport accesses your thin client through the factory-installed Rapport® Agent and Preboot Execution Environment (PXE) client utilities. PXE upgrade services and Virtual Network Computing (VNC) Viewer are built-in to Rapport (see “Virtual Network Computing (VNC) Viewer” on page 3).

The Workgroup Edition of Wyse Rapport® is suitable for managing up to 750 client thin clients. It is provided with the thin client without charge.

The Enterprise Edition of Wyse Rapport® is designed to manage larger numbers (greater than 750) of client thin clients. For information about obtaining or upgrading to the Enterprise Edition of Rapport contact Wyse Sales or Service (see “Ordering Information” on page iii).

Virtual Network Computing (VNC) Viewer

VNC Server is factory-installed on your thin client and is, by default, automatically launched on log-on. It allows a thin client to be operated/monitored (shadowed) from a remote machine on which VNC Viewer is installed (primarily for troubleshooting and support purposes). The administrator uses a VNC Server dialog box that allows a password to be changed and properties to be set for a thin client. An administrator wanting to shadow a thin client must run the VNC Viewer component on the remote machine (accessed either from the Rapport Administrative Software or from a separate installation). The administrator using the VNC Viewer must know the password to the server component on a machine as well as a machine IP address or valid DNS name. For information about VNC, refer to “WinVNC” on page 60.

Model Summary

This section provides a summary of features for the Winterm™ 9 series Thin Clients.

Note

With all Winterm™ 9 series Thin Clients, be sure to plug the Wyse PS/2-type mouse into the Wyse keyboard for proper mouse functionality.

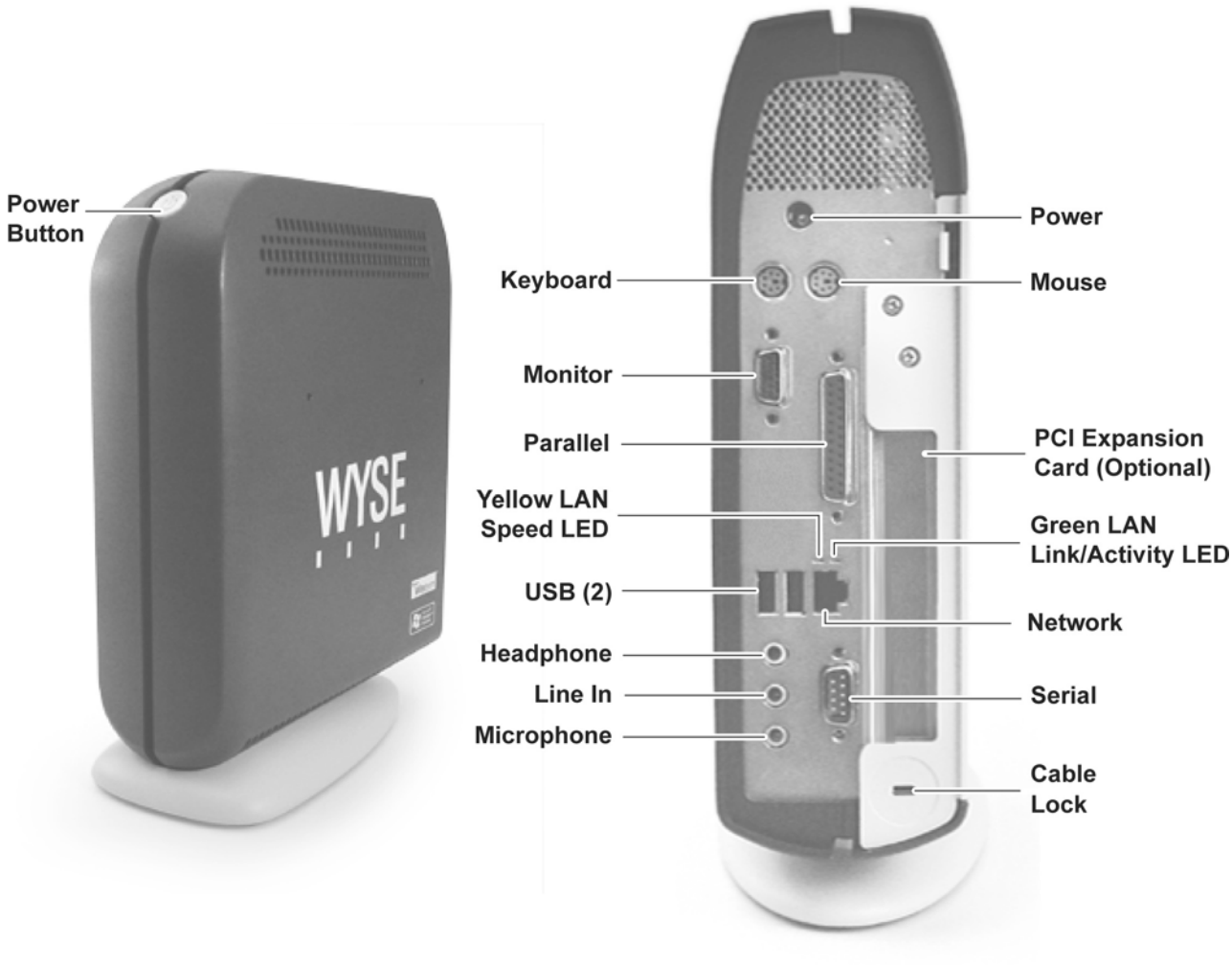
Note

Thin client data sheets, the product registration form, and information about Rapport for Wyse and Rapport Administrative Software are available through the Wyse Web site at: http://www.wyse.com.

Model 9450XE

The 9450XE is a small-footprint, modular thin client. The connections for power, network, monitor, keyboard, mouse, serial and parallel devices, and USB peripherals are on the back panel of the thin client. The rear panel contains an access slot for an optional PCI expansion card.

Figure 1 Model 9450XE Thin Client



The 9450XE has two LED indicators on the back of the unit next to the RJ-45 LAN port (Network connector). The Green LED is a Dual Link/Activity Indicator, and the Yellow LED is a Speed Indicator. The blinking sequence (or absence) of these LEDs indicates the condition of the LAN connection.

- Green LED On—Link, but no Activity
- Green LED Blinking—Link with Activity
- Green LED Off—No Link
- Yellow LED On—100 Mbps
- Yellow LED Off—10 Mbps or no Link

Model 9455XL

The 9455XL is a modular thin client with a rugged metal chassis that can be mounted vertically or horizontally. The connections for power, network, keyboard, mouse, serial and parallel devices, and USB ports are on the back panel of the thin client. The rear panel contains an access slot for an optional PCI expansion card.

Note

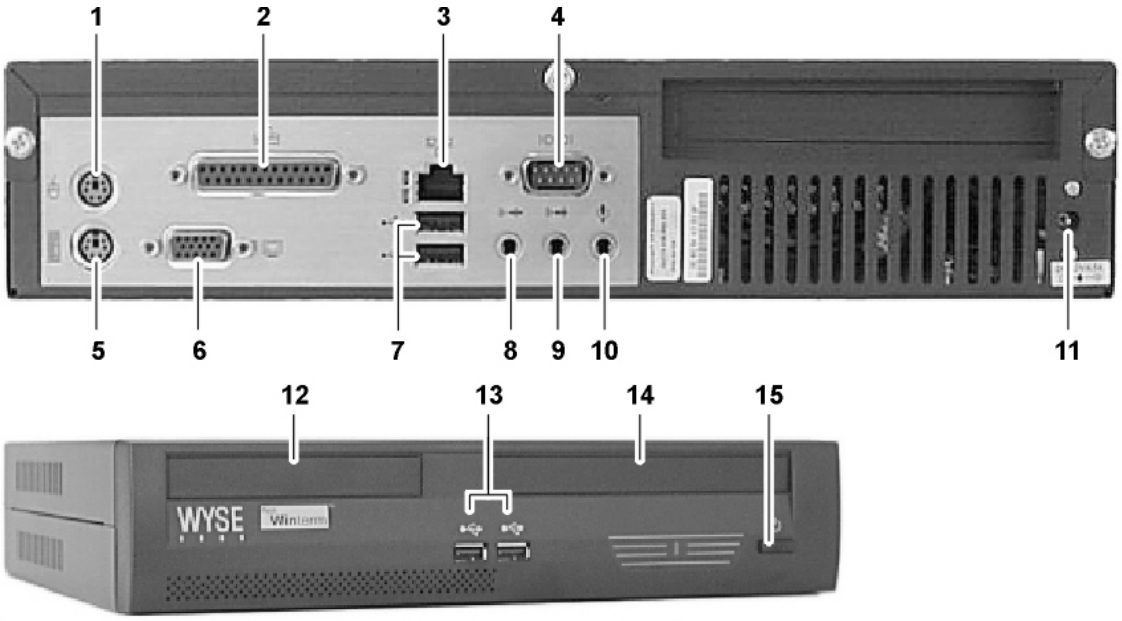
When the thin client is mounted vertically, the power button should be at the top of the thin client.

The power button is located on the front of the thin client. The front of the thin client contains two additional USB ports as well as access bays for optional CD-ROM and USB floppy drives.

Note

The front USB ports and PCI Expansion Card slot are not available if the floppy drive option is installed.

Figure 2 Model 9455XL Thin Client



1 PS/2-type mouse interface	**6** Video port	**11** +12V Power cable interface
2 Parallel port	**7** USB port (2)	**12** Floppy drive (optional)
3 Network connection, 10/100Base-T	**8** Speaker out	**13** USB port (2)*
4 Serial Port	**9** Line in	**14** CD-ROM drive (optional)
5 PS/2-type keyboard interface	**10** Microphone	**15** Power button

*Please see the note above this figure.

The 9455XL has two LED indicators on the back of the unit next to the RJ-45 LAN port (Network connector). The Green LED is a Dual Link/Activity Indicator, and the Yellow LED

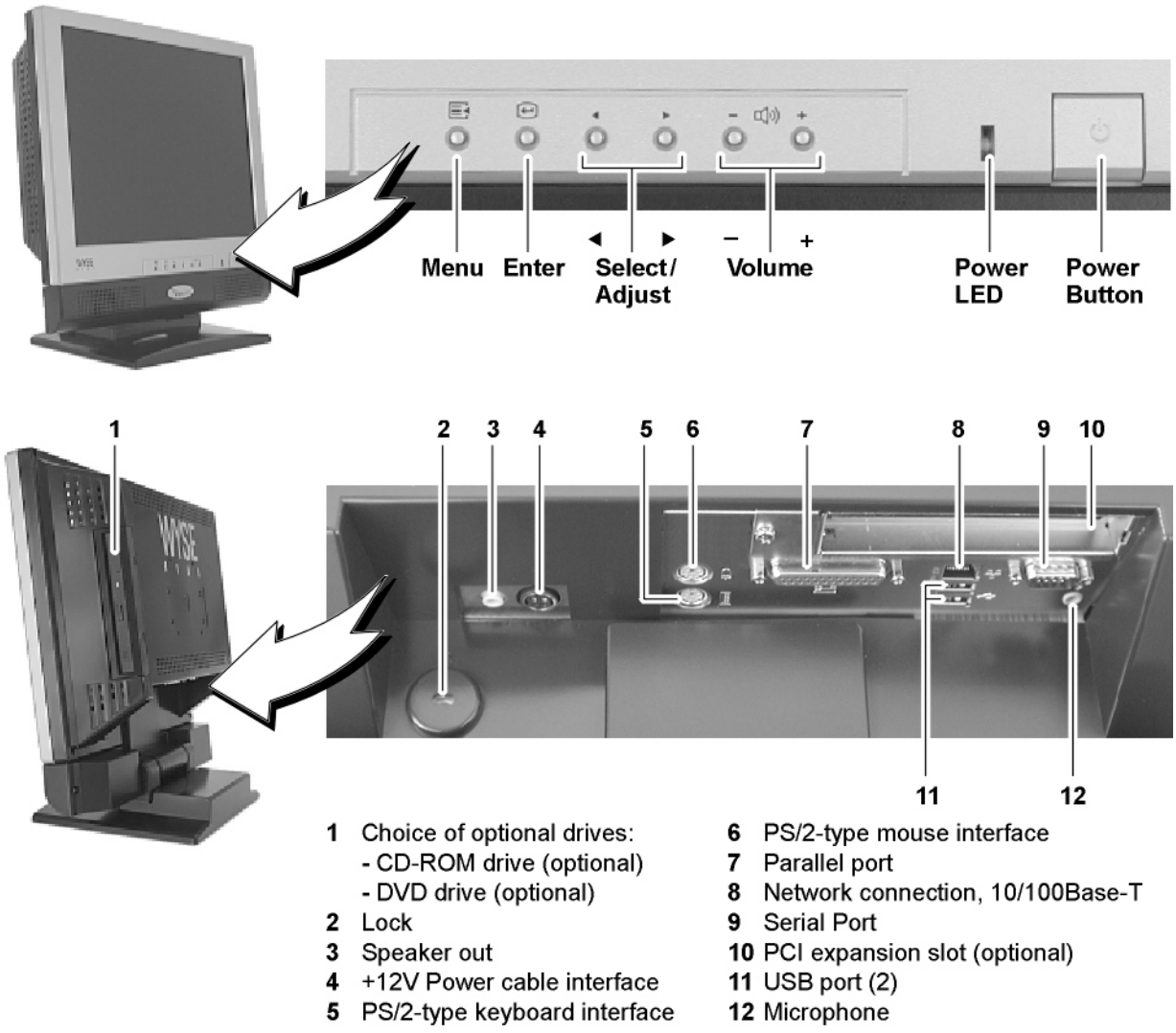
is a Speed Indicator. The blinking sequence (or absence) of these LEDs indicates the condition of the LAN connection.

- Green LED On—Link, but no Activity
- Green LED Blinking—Link with Activity
- Green LED Off—No Link
- Yellow LED On—100 Mbps
- Yellow LED Off—10 Mbps or no Link

Model 9650XE

The 9650XE is a small-footprint thin client with an integrated 15 inch flat panel LCD. The connections for power, network, keyboard, mouse, serial and parallel devices, speakers, and USB peripherals are on the underside of the back panel of the thin client. The power button switch is located on the front of the thin client. The default resolution for the 9650XE is 1024x768 @ 60Hz, the font-smoothing setting is standard, and the default color depth is 16-bit.

Figure 3 Model 9650XE Thin Client



1 Choice of optional drives:
- CD-ROM drive (optional)
- DVD drive (optional)

2 Lock
3 Speaker out
4 +12V Power cable interface
5 PS/2-type keyboard interface
6 PS/2-type mouse interface
7 Parallel port
8 Network connection, 10/100Base-T
9 Serial Port
10 PCI expansion slot (optional)
11 USB port (2)
12 Microphone

The LCD Thin Client features front panel thin client control buttons and a menu-driven On-Screen Display (OSD) to setup and customize the thin client display.

The 9650XE has one LED indicator on the front of the unit next to the power button. The Green LED indicates that the power is on.

The 9650XE has two LED indicators on the back of the unit next to the RJ-45 LAN port (Network connector). The Green LED is a Dual Link/Activity Indicator, and the Yellow LED

is a Speed Indicator. The blinking sequence (or absence) of these LEDs indicates the condition of the LAN connection.

- Green LED On—Link, but no Activity
- Green LED Blinking—Link with Activity
- Green LED Off—No Link
- Yellow LED On—100 Mbps
- Yellow LED Off—10 Mbps or no Link

Model J400, Product 941GXL

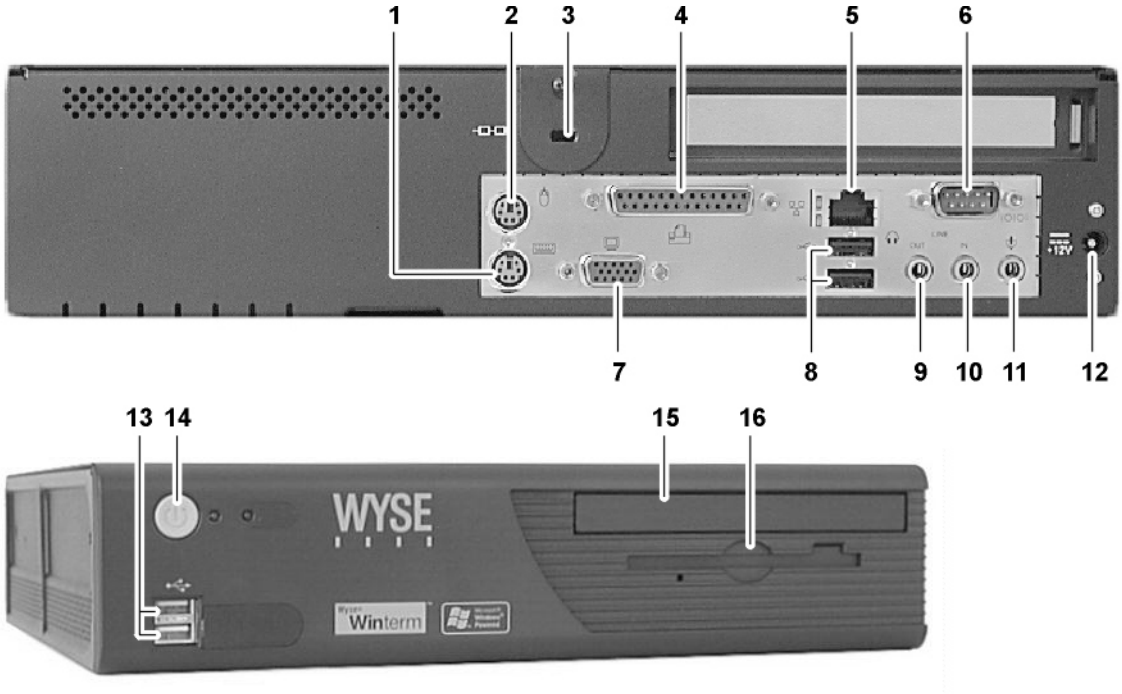
The 941GXL is a modular thin client with a rugged metal chassis that can be mounted vertically or horizontally. The 941GXL has a slightly larger chassis than the 9455XL and features a faster processor than any of the other Series 9000 devices. The connections for power, network, keyboard, mouse, serial and parallel devices, and USB ports are on the back panel of the thin client. The rear panel contains an access slot for an optional PCI expansion card.

Note

When the thin client is mounted vertically, the power button should be at the bottom of the thin client.

The power button is located on the front of the thin client. The two LEDs next to the power button indicate Power and IDE Device (Flash or Hard drive) activity.

Figure 4 Model J400, Product 941GXL Thin Client



1 PS/2-type keyboard interface	**7** Video port	**13** USB port (2)*
2 PS/2-type mouse interface	**8** USB port (2)	**14** Power button
3 Lock	**9** Speaker out	**15** CD-ROM drive (optional)
4 Parallel port	**10** Line in	**16** Floppy drive (optional)
5 Network connection, 10/100Base-T	**11** Microphone	
6 Serial Port	**12** +12V Power cable interface	

*Please see the note above this figure.

The 941GXL has two LED indicators on the back of the unit next to the RJ-45 LAN port (Network connector). The Green LED is a Dual Link/Activity Indicator, and the Yellow LED

is a Speed Indicator. The blinking sequence (or absence) of these LEDs indicates the condition of the LAN connection.

- Green LED On—Link, but no Activity
- Green LED Blinking—Link with Activity
- Green LED Off—No Link
- Yellow LED On—100 Mbps
- Yellow LED Off—10 Mbps or no Link

Model x150, Product 9150SE

The 9150SE is a small-footprint, modular thin client. The connections for power, network, audio, monitor (video), keyboard, mouse, serial and parallel devices, and USB devices and peripherals are on the back panel of the thin client. The power button switch is located on the front-top of the unit.

Figure 5 Model 9150SE Thin Client

1	Power Button	**7**	Power cable interface
2	Microphone*	**8**	Lock
3	Speaker out	**9**	Parallel port
4	USB port (4)	**10**	PS/2-type keyboard interface
5	Network connection, 10/100Base-T	**11**	PS/2-type mouse interface
6	Monitor interface	**12**	Serial port (2)

*Feature dependent on server implementation.

The 9150SE has three LED indicators on the back of the unit next to the RJ-45 LAN port (Network connector). The blinking sequence (or absence) of these LEDs indicates the condition of the LAN connection.

- Green LED On—10 Mbps
- Amber LED On—100 Mbps
- Yellow LED Blinking—Link with Activity

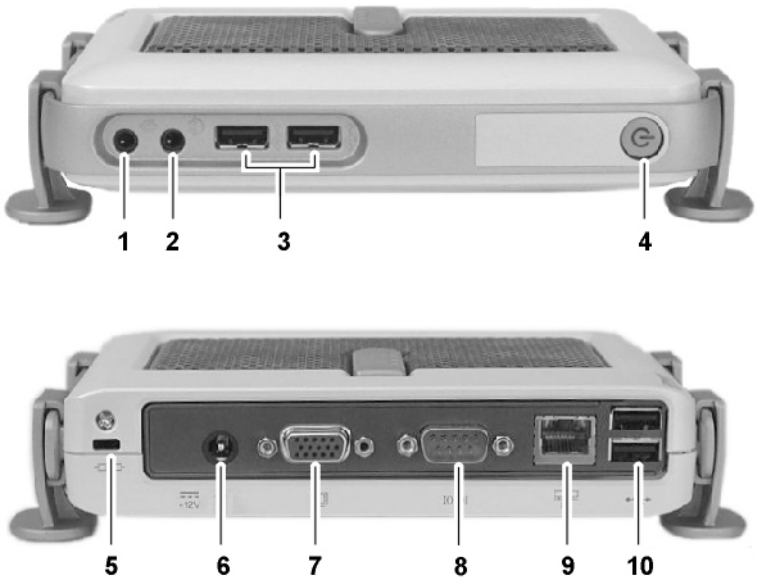
After power connection, the power LED will remain amber for some time. The user must not press the power button until the amber light is off. When the amber light is off, lightly press the power button on the thin client to turn on power.

Model SX0, Product S90

The S90 is a small-footprint, modular XPe-based thin client. The lock receptacle, connections for power, monitor (video), serial port, network, and USB port (2), are on the back panel of the thin client. The microphone in, speaker out, USB port (2), and power button switch are located on the front of the unit.

Note
Mouse connects to keyboard.

Figure 6 Model SX0, Product S90 Thin Client



1 Microphone in	**6** +12V Power input
2 Speaker out	**7** Video port
3 USB port (2)	**8** Serial port
4 Power on/off button	**9** Network port, 10/100Base-T
5 Lock receptacle	**10** USB port (2)

The S90 has LED indicators on the front of the unit next to the power button. The blinking sequence (or absence) of these LEDs indicates the condition of the LAN connection.

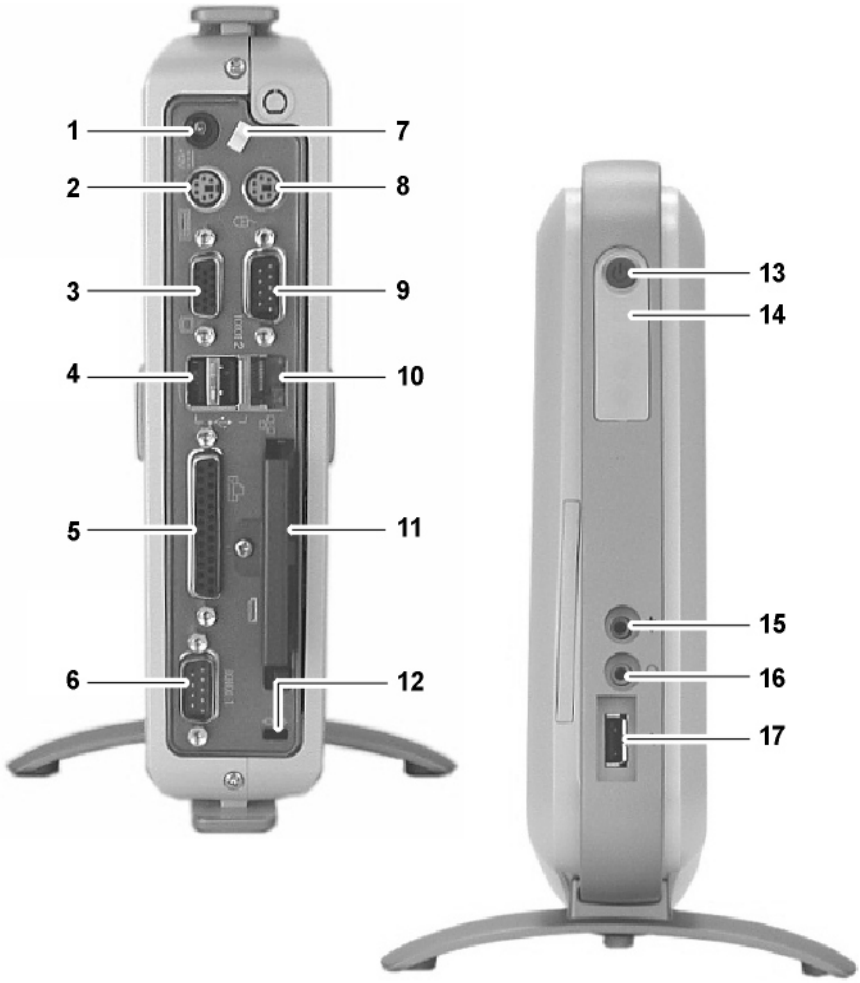
- Green LED On—10 Mbps
- Amber LED Standby

After power connection, the power LED will remain amber for some time. The user must not press the power button until the amber light is off. When the amber light is off, lightly press the power button on the thin client to turn on power.

Model VX0, Product V90

The V90 is a small-footprint, modular XPe-based thin client. The connections for power, network, audio, monitor (video), keyboard, mouse, serial and parallel devices, and USB devices and peripherals are on the back panel of the thin client. The power button switch, LED indicators, Microphone in, Line in, and USB port are located on the front of the unit.

Figure 7 Model VX0, Product V90 Thin Client



1 +12V Power input
2 PS/2-type keyboard port
3 Video port
4 USB port (2)
5 Parallel port
6 Serial port
7 Secure clip for DC power cord
8 PS/2-type mouse port
9 Serial port
10 Network port, 10/100Base-T
11 PC-Card expansion slot with cover
12 Lock receptacle
13 Power on/off button
14 LED (amber: standby; green: on)
15 Microphone in
16 Speaker out
17 USB port

The V90 has LED indicators on the front of the unit next to the power button. The blinking sequence (or absence) of these LEDs indicates the condition of the LAN connection.

- Green LED On—10 Mbps
- Amber LED Standby

After power connection, the power LED will remain amber for some time. The user must not press the power button until the amber light is off. When the amber light is off, lightly press the power button on the thin client to turn on power.

Mounting and Connecting the Thin Client

The Quick Start Guide (included in the shipping carton) provides instructions for mounting and connecting the thin client. The thin client can be placed on a desktop, or it can be mounted on a wall using an optional wall-mount bracket available from Wyse Technology.

Caution

Mount and connect the thin client only as directed in the Quick Start Guide (and in the wall-mount bracket instructions, if used). Be sure that there is sufficient space around the thin client for ventilation. ***Follow all precautions listed in the Quick Start Guide***.

If included in the shipping carton, the following items should be used with thin client installation:

- Keyboard and mouse (may or may not be included)
- Power cord (may or may not be included)
- Power supply
- Noise suppressor (ferrite bead)
- Desktop mounting stand (if required)
- Quick Start Guide

Caution

To ensure regulatory compliance, use only the power supply included in the shipping carton, or an approved equivalent (see “Device Power Supply” on page v), with the thin client.
The noise suppressor (ferrite bead) included in the box with the thin client must be installed on the network cable as described in the accompanying instructions (for details, refer to the regulatory notices in the front matter of this document).

Note

Clicking a scroll wheel on a mouse is supported.

Extended XPe Features

The operating system of the Winterm™ 9 series Thin Client has extended features not found in standard Windows XP. Controls for extended XPe features are available only through an Administrator logon account—with exceptions of the Citrix Program Neighborhood, the Microsoft™ Terminal Server Client (Remote Desktop Connection Manager), and if installed, a special-order terminal emulation application.

Logging On

Users can log-on automatically or manually.

Automatic Log-on

The default for the thin client is automatic log-on. The administrator can use the Winlog applet in the Control Panel to enable/disable auto logon and change the auto logon user name, password, and domain. Only the administrator logon account can change auto logon properties.

Note

To save the changes, be sure to flush the Enhanced Write Filter cache at any time during the current system session. For information about the Enhanced Write Filter and procedures for flushing the cache, refer to “Enhanced Write Filter” on page 43.

The Log-on to Windows dialog box is bypassed if automatic log-on is enabled. If you want to log-on as a different user while auto logon is enabled, log off while holding down the Shift key. This will cause the Log-on to Windows dialog box to display and allow you to manually enter the log-on information.

Manual Log-on

When automatic log-on is not enabled, upon thin client startup the Log-on to Windows dialog box displays.

Type the log-on information in the User Name and Password text boxes:

- For a user log-on account, the factory-default user name and password are both `User`.
- For an administrator log-on account, the factory-default user name and password are both `Administrator`.

Note

Passwords are case sensitive but user names are not case sensitive.

Caution

For security purposes it is recommended that all passwords be changed from the defaults. An administrator can change passwords by using the **Ctrl**+**Alt**+**Del** key combination to open the Windows Security dialog box and then clicking **Change Password.** The password can not be changed when logged-on as a user.

Note

The administrator can create additional user accounts by using the User Manager utility available through the Control Panel. However, due to local memory constraints, the number of additional users should be kept to a minimum. For administrator information on user accounts, refer to “User Manager” on page 55.

Automatically Launched Utilities

The following utilities are automatically launched:

- “Enhanced Write Filter”
- “NetXClean”
- “VNC Server”
- “Time Synchronization Utility”

Enhanced Write Filter

Upon system start, the Enhanced Write Filter utility is automatically launched. The Enhanced Write Filter provides security and protects the flash memory from excessive write activity. The active/inactive status of the Enhanced Write Filter is indicated by the color of the Enhanced Write Filter status icon in the system tray of the desktop taskbar. For detailed information about the Enhanced Write Filter, refer to “Enhanced Write Filter” on page 43.

Note

Changes made to the thin client configuration are lost when the thin client is restarted unless the Enhanced Write Filter cache is flushed during the current system session. For procedures on flushing the cache, refer to “Enhanced Write Filter” on page 43.

NetXClean

Upon system start, the NetXClean utility is automatically launched. NetXClean is a clean-up utility that keeps extraneous information from being stored on the local disk. For detailed information on this utility, refer to “NetXClean Utility” on page 50.

VNC Server

Upon thin client log-on, the Windows VNC Server utility is automatically launched. VNC allows the thin client desktop to be accessed remotely for administration and support. For detailed information about VNC, refer to “WinVNC” on page 60.

Time Synchronization Utility

Upon thin client log-on, the time synchronization utility dialog box briefly displays. This feature can be disabled by the administrator (locally or remotely) if desired.

The XPe Desktop

This section includes information on the following:

- “Users Desktop”
- “Administrators Desktop” on page 21
- “Client Information” on page 22
- “Logging Off, Restarting, and Shutting Down the Thin Client” on page 23

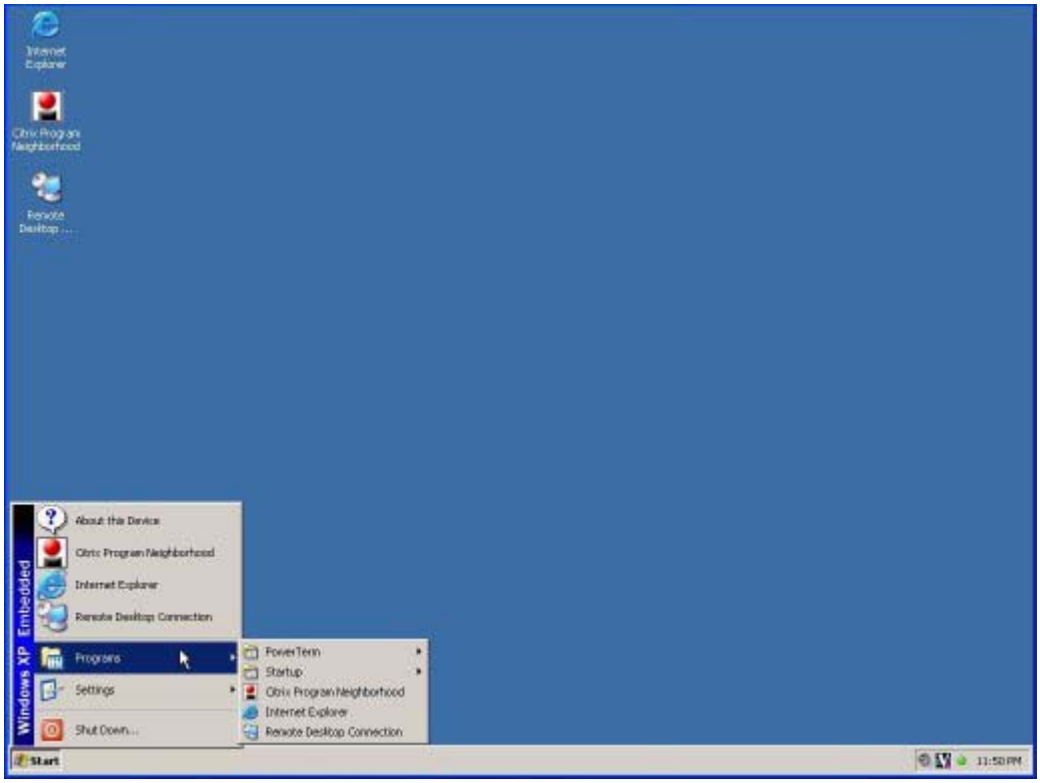
Users Desktop

The desktop that appears for a User log-on is a Windows desktop. Icons present on the default user desktop are Citrix Program Neighborhood, Remote Desktop Connection, and Internet Explorer. These selections are also available from the Start menu. If the terminal emulation application is installed, it can be opened from the **Start** | **Programs** menu. The audio volume icon, VNC Server icon, Enhanced Write Filter status icon, and the System time are located in the taskbar system tray.

Note

Links to remote ICA-published applications may also be listed on the Start menu and/or appear as icons on the desktop (for instructions, refer to the Citrix NFuse 1.6 server documentation).

Figure 8 Example of a User desktop



For information about the functionality of the standard Windows XP desktop and Start menu items, refer to the applicable Microsoft documentation (search and navigate to the Windows XP Support Center) at: http://support.microsoft.com/default.aspx.

For Internet locations of the Citrix Program Neighborhood and Remote Desktop Connection help documents, refer to “Programs Extended Menu” on page 24.

Note

The user Control Panel (available by clicking **Start** | **Settings** | **Control Panel**) provides access to a limited set of resources for configuring Windows XP user preference settings. You must be logged on as administrator to access the extended set of system resources.

Note

Right-clicking the mouse when the pointer is on the users desktop does not open a pop-up menu.

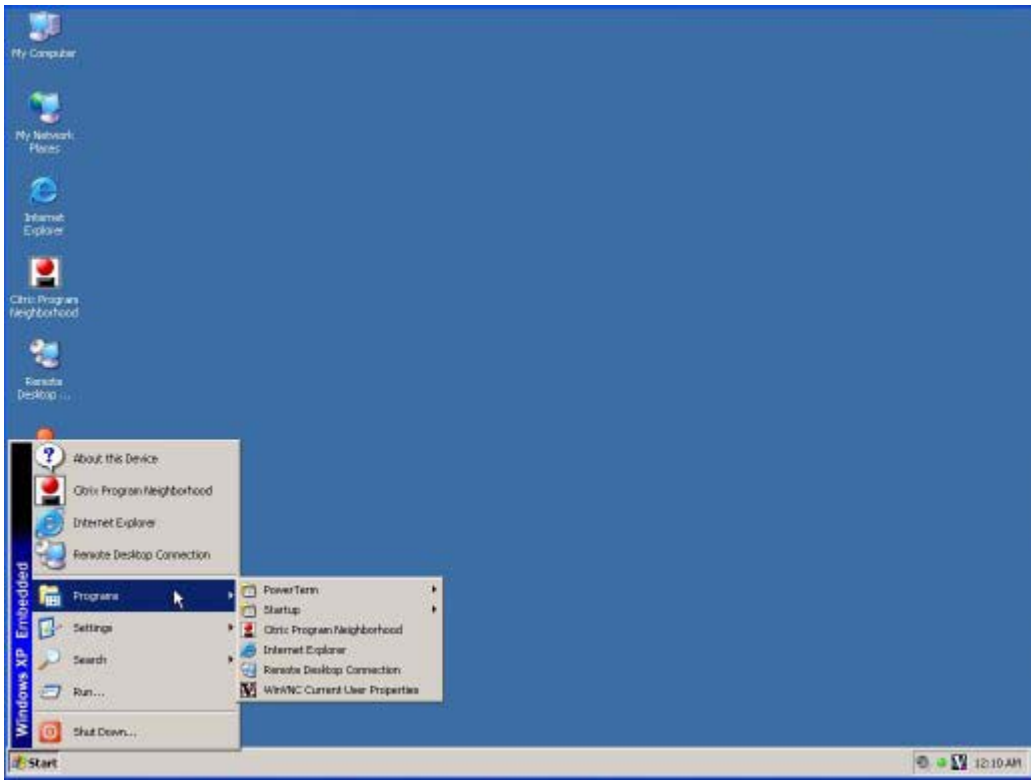
Note

You can copy and paste text between remote session and the local computer by using standard copy and paste methods.

Administrators Desktop

The desktop that appears for an administrator log-on is a Windows desktop. Icons present on the default administrator desktop are My Computer, My Network Places, Citrix Program Neighborhood, Remote Desktop Connection, Internet Explorer, Enhanced Write Filter Enable, and Enhanced Write Filter Disable (for a description of the Enhanced Write Filter Disable and Enhanced Write Filter Enable icons, refer to “Enhanced Write Filter Enable and Enhanced Write Filter Disable Desktop Icons” on page 47). The Citrix Program Neighborhood, Internet Explorer, and Remote Desktop Connection application selections are also available from the Start menu. If the terminal emulation application is installed, it can be opened from the **Start** | **Programs** menu. The audio volume icon, Enhanced Write Filter status icon, VNC Server icon, and the System time are located in the taskbar system tray. Extended resources, available only to administrators, can also be accessed from the Start menu.

Figure 9 Example of an administrator desktop



For information about the functionality of the standard Windows XP desktop and Start menu items, refer to the applicable Microsoft documentation (search and navigate to the Windows XP Support Center) at: http://support.microsoft.com/default.aspx.

Extended selections are described in “Programs Extended Menu” on page 24.

Note

Right-clicking the mouse when the pointer is on the administrators desktop opens a pop-up menu.

Client Information

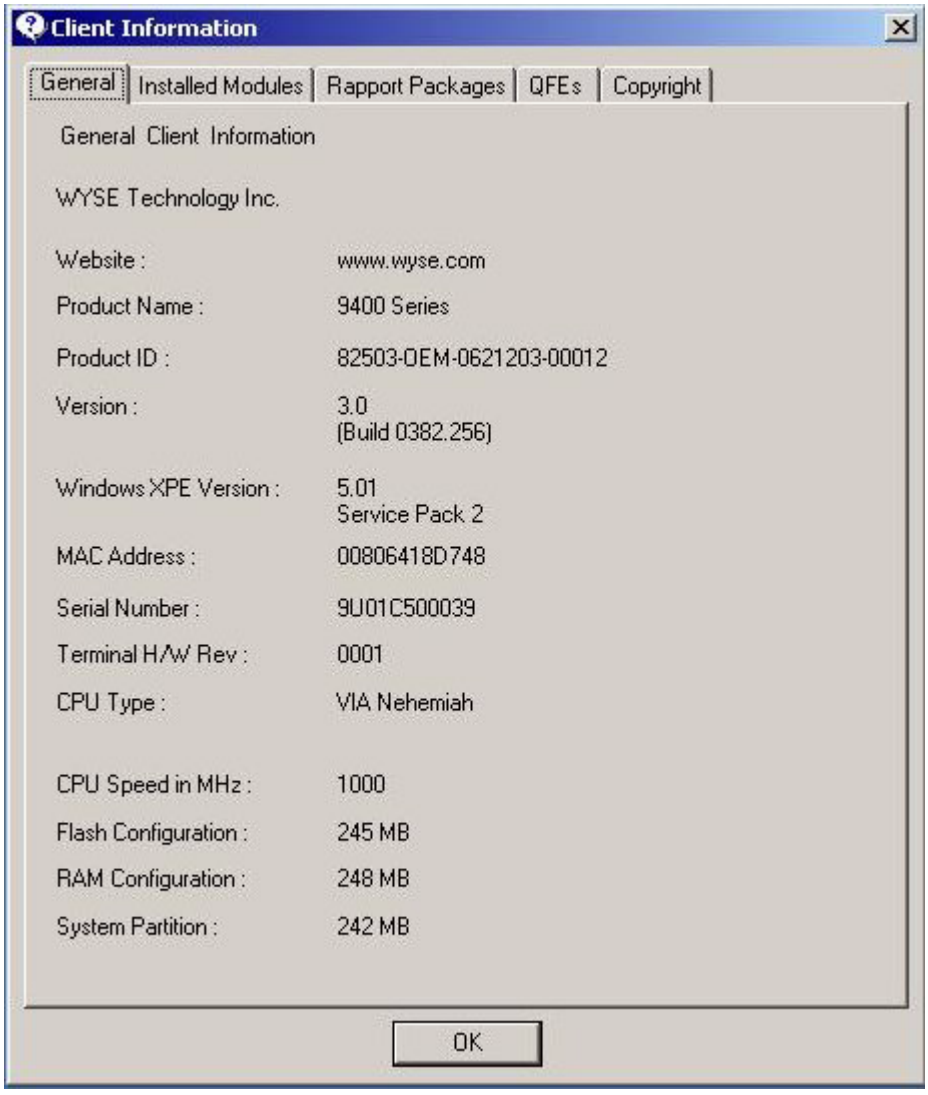
Use the Client Information dialog box (**Start | About this Device**) to view various information about the thin client.

Note

The information shown varies for different thin clients and software releases.

For example, the General tab displays thin client information such as the Website, Product Name, Product ID, Version, Windows XPE Version, MAC Address, Serial Number, Terminal H/W Rev, CPU Type, CPU Speed in MHz, Flash Configuration, RAM Configuration, and System Partition.

Figure 10 Client Information dialog box



You can click the:

- **Installed Modules** tab to view the list of applications that are installed on the thin client.
- **Rapport Packages** tab to view the list of Rapport Packages that have been applied to the thin client.

- **QFEs** tab to view the list of Microsoft QFEs applied to the thin client.
- **Copyrights** tab to view Wyse copyright information.

Logging Off, Restarting, and Shutting Down the Thin Client

Use the Start menu on the taskbar to log off, restart, or shut down the thin client. Click **Start | Shut Down** to open the Shut Down Windows dialog box, and select the option you want from the list box.

Note

You can also log off or shut down using the Windows Security dialog box, which can be opened by using the **Ctrl**+**Alt**+**Del** key combination.

Note

If automatic log-on is enabled, when you log off (without shutting down) the thin client immediately logs on the default user. For instructions on logging on as a different user, refer to “Logging On” on page 17.

The following utilities are affected by logging off, restarting, and shutting down the thin client:

- **Enhanced Write Filter cache** - If you make changes to system configuration settings and want them to persist, you must flush the Enhanced Write Filter cache during the current system session. Otherwise, the new settings will be lost when the thin client is shut down or restarted. The Enhanced Write Filter cache contents are *not* lost when you simply log off and on again (as the same or different user); that is, you can flush the Enhanced Write Filter cache after the new log-on and still retain the changes. For instructions on flushing the Enhanced Write Filter cache, refer to “Enhanced Write Filter Control Dialog Box” on page 48. For general information about the Enhanced Write Filter, refer to “Utilities and Settings” on page 43.

Note

A User log-on account does not have cache flush privileges; this is a local or remote administrator function.

- **NetXClean Utility** - NetXClean is a clean-up utility that keeps extraneous information from being stored on the flash memory. Clean-up is triggered automatically on restart, shut down, or user log off. For details about NetXClean, refer to “NetXClean Utility” on page 50.
- **Power Management** - A Monitor Saver turns off the video signal to the monitor, allowing the monitor to enter a power-saving mode after a designated idle time. Parameters for this mode are available by clicking **Start | Settings | Control Panel | Screen Saver | Power**.
- **Wake-on-LAN** - This standard XP feature allows the Rapport Administrative Software to perform image updates and remote administration functions at any time. To use this feature, the thin client power must remain on.
- **Thin Client Time** - After power off, clock time will not be lost as long as the power source remains on. Clock time will be lost if the power source is off and the battery option is not installed. The local time utility can be set to synchronize the thin client clock to a time server automatically (at a designated time) or manually.

Note

Correct time should be maintained as some applications require access to local thin client time. The Date and Time Properties dialog box can be opened by clicking the System time area in the taskbar or by double-clicking the **Date and Time** icon in the Control Panel.

Programs Extended Menu

The Programs extended menu (**Start** | **Programs**) includes:

- “PTSManager and ptw32” on page 24
- “Neutron Time Synchronization Application”
- “Citrix Program Neighborhood” on page 28
- “Internet Explorer” on page 27
- “Remote Desktop Connection” on page 29
- “WinVNC Current User Properties” on page 30 (available to administrators only)

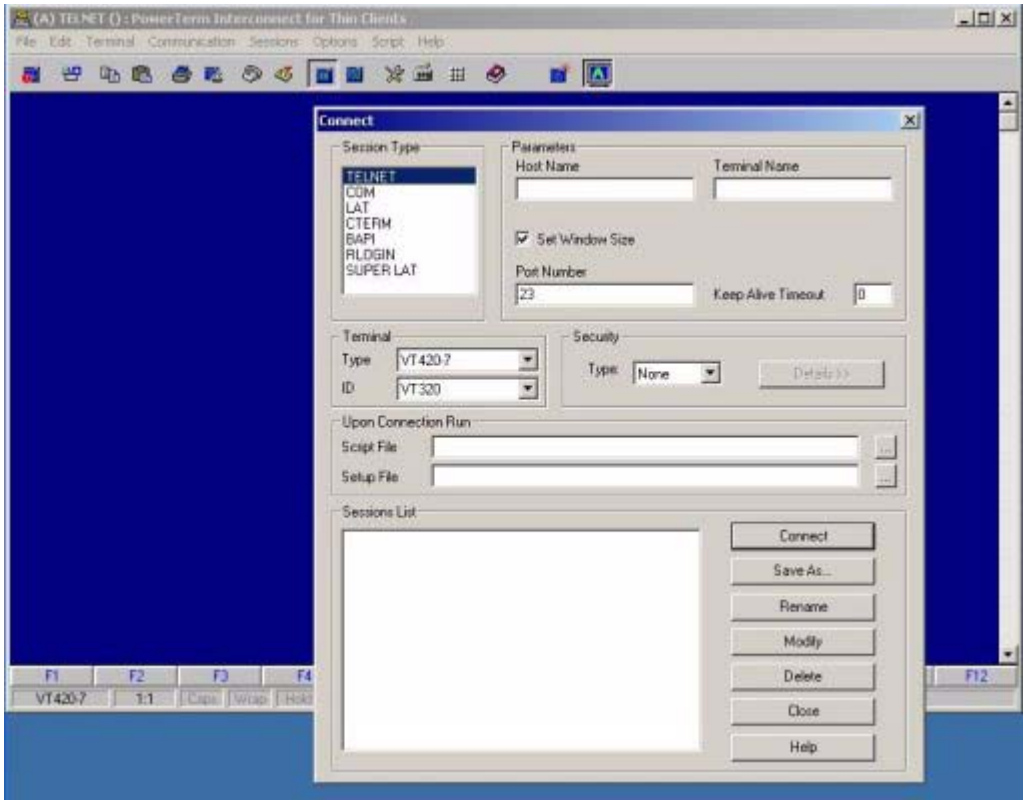
PTSManager and ptw32

Clicking **Start | Programs | PowerTerm | PTSManager** (by default, a desktop icon is not installed) opens the Power Term Session Manager. Use the Power Term Session Manager to manage your connections.

Figure 11 Power Term Session Manager

Clicking **Start | Programs | PowerTerm | ptw32** (by default, a desktop icon is not installed) opens the terminal emulation window and Connect dialog box.

Figure 12 Terminal emulation window and Connect dialog box



The ptw32 application allows you to configure your connection information.

For complete instructions on installing and using terminal emulation, refer to the terminal emulation documentation supplied separately.

Neutron Time Synchronization Application

Clicking **Start | Programs | Startup | Neutron** opens the Neutron dialog box. The Neutron dialog box contains the current System Time and Atomic Time. To Synchronize the System Time with the Atomic Time, click **Synchronize** in the Neutron dialog box. To retrieve the current Atomic time from a time server, click **Get Atomic Time**.

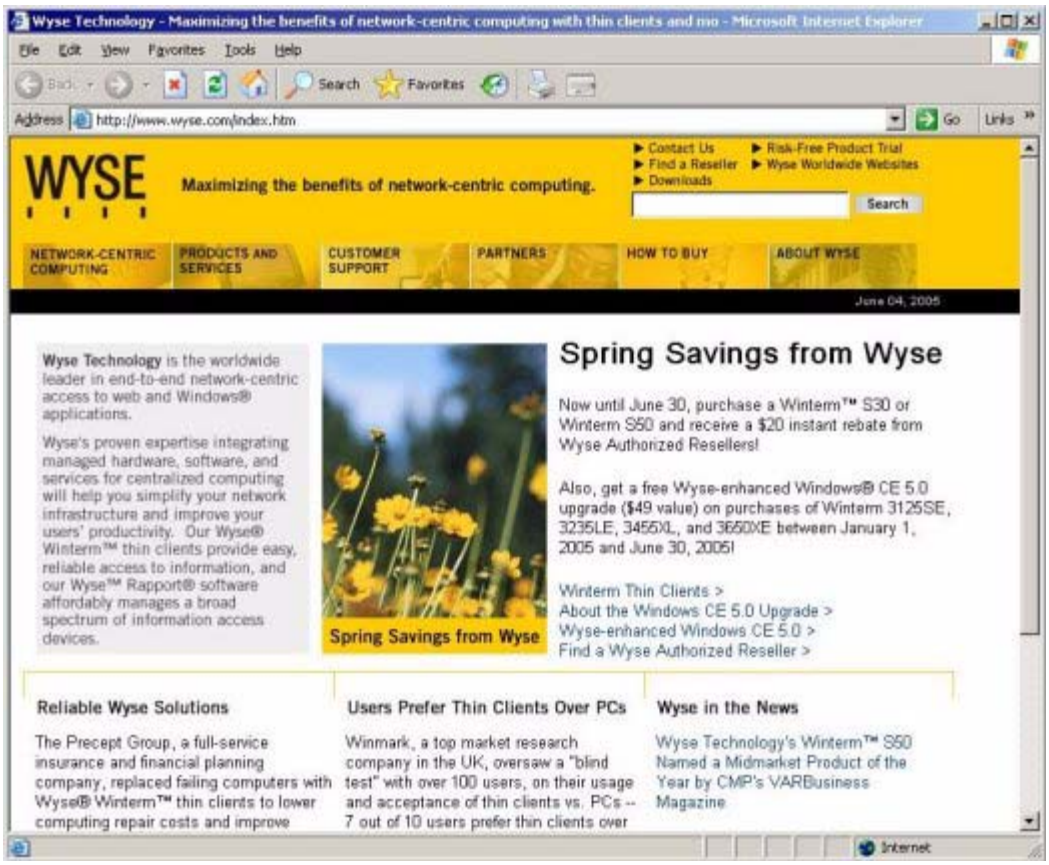
To configure the Time server IP address, click **>>** in the Neutron dialog box to open the extended menu and select an IP address from the Time server drop-down menu. You can also select (using the options and check boxes) whether to use TCP or UDP, whether or not you want Auto synchronization to occur at system startup, and whether or not to exit the Time server after the time has been synchronized. To close the extended menu, click **<<**.

Figure 13 Neutron dialog box (extended menu)

Internet Explorer

Microsoft Internet Explorer (MSIE) version 6.0 browser is installed locally on the thin client. Clicking **Start | Programs | Internet Explorer** or **Start | Internet Explorer** (or double-clicking the desktop icon) opens IE 6.0. The Internet options settings for the browser have been preselected at the factory to limit writing to flash memory. These settings prevent exhaustion of the limited amount of flash memory available and should not be modified. The user can access another browser through an ICA or RDP account if more browser resources are required.

Figure 14 Internet Explorer window


Wyse Technology - Maximizing the benefits of network-centric computing with thin clients and mo - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://www.wyse.com/index.htm
WYSE
Maximizing the benefits of network-centric computing.
Contact Us
Find a Reseller
Downloads
Risk-Free Product Trial
Wyse Worldwide Websites
Search
NETWORK-CENTRIC COMPUTING
PRODUCTS AND SERVICES
CUSTOMER SUPPORT
PARTNERS
HOW TO BUY
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June 04, 2005
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Wyse's proven expertise integrating managed hardware, software, and services for centralized computing will help you simplify your network infrastructure and improve your users' productivity. Our Wyse® Winterm™ thin clients provide easy, reliable access to information, and our Wyse™ Rapport® software affordably manages a broad spectrum of information access devices.
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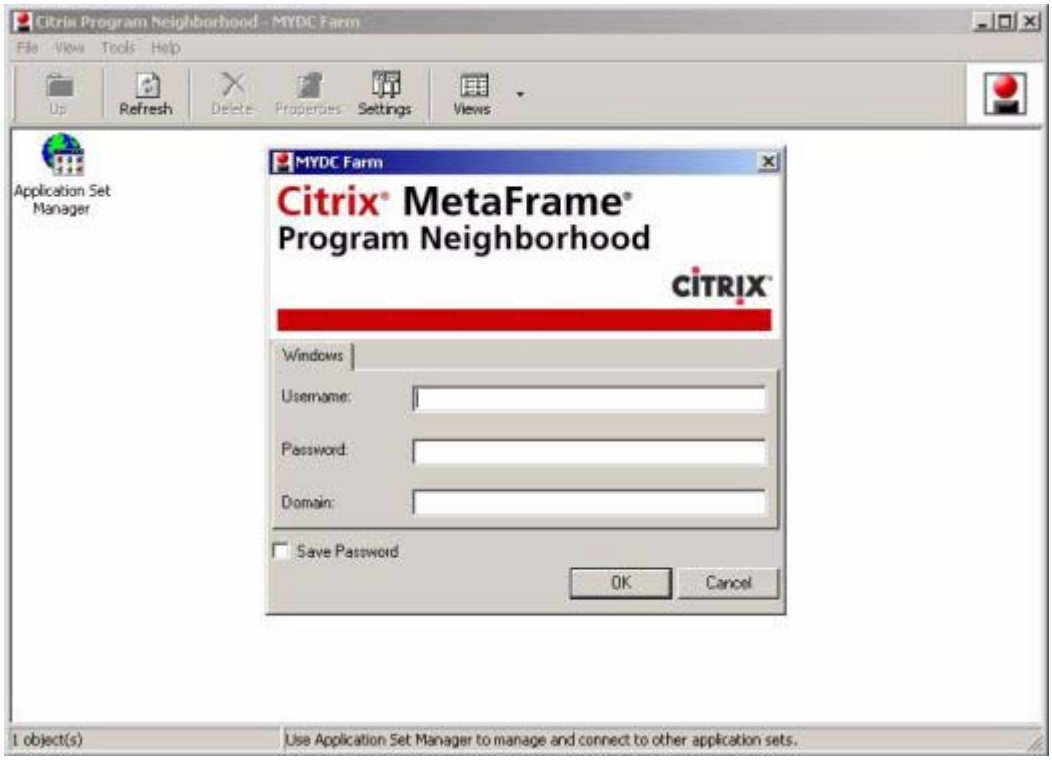
Spring Savings from Wyse
Now until June 30, purchase a Winterm™ S30 or Winterm S50 and receive a $20 instant rebate from Wyse Authorized Resellers!
Also, get a free Wyse-enhanced Windows® CE 5.0 upgrade ($49 value) on purchases of Winterm 3125SE, 3235LE, 3455XL, and 3650XE between January 1, 2005 and June 30, 2005!
Winterm Thin Clients >
About the Windows CE 5.0 Upgrade >
Wyse-enhanced Windows CE 5.0 >
Find a Wyse Authorized Reseller >
Reliable Wyse Solutions
The Precept Group, a full-service insurance and financial planning company, replaced failing computers with Wyse® Winterm™ thin clients to lower computing repair costs and improve
Users Prefer Thin Clients Over PCs
Winmark, a top market research company in the UK, oversaw a "blind test" with over 100 users, on their usage and acceptance of thin clients vs. PCs -- 7 out of 10 users prefer thin clients over
Wyse in the News
Wyse Technology's Winterm™ S50 Named a Midmarket Product of the Year by CMP's VARBusiness Magazine
Internet

Citrix Program Neighborhood

Clicking **Start | Programs | Citrix Program Neighborhood** or **Start | Citrix Program Neighborhood** (or double-clicking the desktop icon) opens the Citrix Program Neighborhood window. Use this program to manage connections to remote applications running on ICA servers.

Documentation for the ICA client application is available from the Citrix Corporation Web site at:
http://download2.citrix.com/files/en/products/client/ica/current/docs/ica_win32_guide.pdf

Figure 15 Citrix Program Neighborhood window



Remote Desktop Connection

Clicking **Start | Programs | Remote Desktop Connection** or **Start | Remote Desktop Connection** (or double-clicking the desktop icon) opens the Remote Desktop Connection dialog box (you can expanded the view by clicking **Options**). Use this program to establish connections to remote applications using RDP.

Note

If you find that the Enhanced Write Filter cache is becoming too full, you can disable Bitmap caching in the RDP Experience tab

For information and instructions on using the Remote Desktop Connection dialog box, refer to the Microsoft documentation (search for Remote Desktop) at: http://www.microsoft.com

Figure 16 Remote Desktop Connection dialog box (expanded view)

WinVNC Current User Properties

WinVNC Current User Properties is available to administrators only. Clicking **Start | Programs | WinVNC Current User Properties** (or double-clicking the icon in the administrator system tray) opens the WinVNC: Current User Properties dialog box. Use this dialog box to enter the VNC log-on password (the default password is `Wyse`), and to select the parameters for the VNC server utility installed on a user thin client.

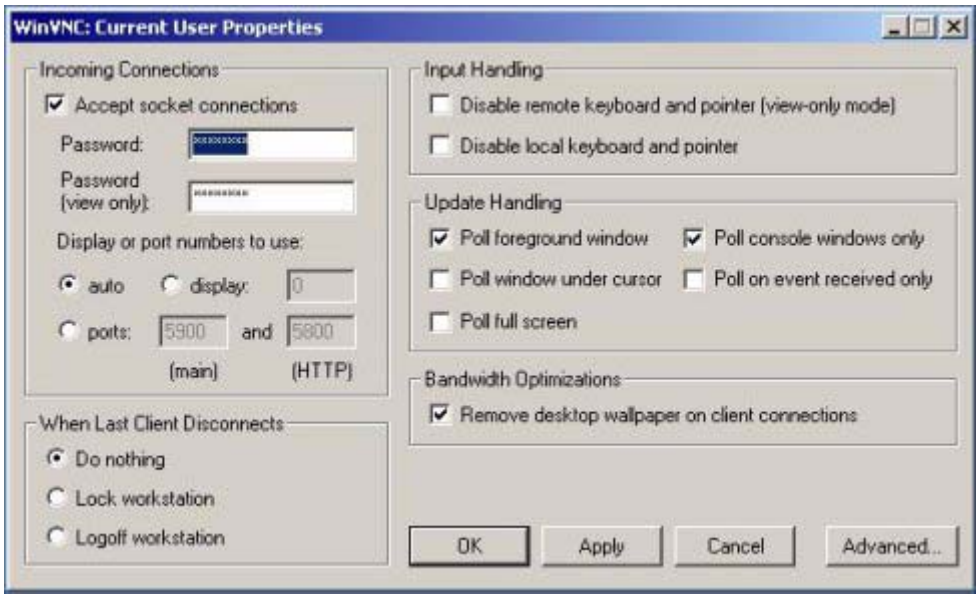
VNC server allows the user thin client to be operated/monitored (shadowed) from a remote machine on which VNC Viewer is installed. VNC is intended primarily for support and troubleshooting purposes.

Note

Hovering the mouse pointer over the VNC icon on the taskbar shows the current IP address of the thin client.

For information on VNC user settings, refer to “WinVNC” on page 60.

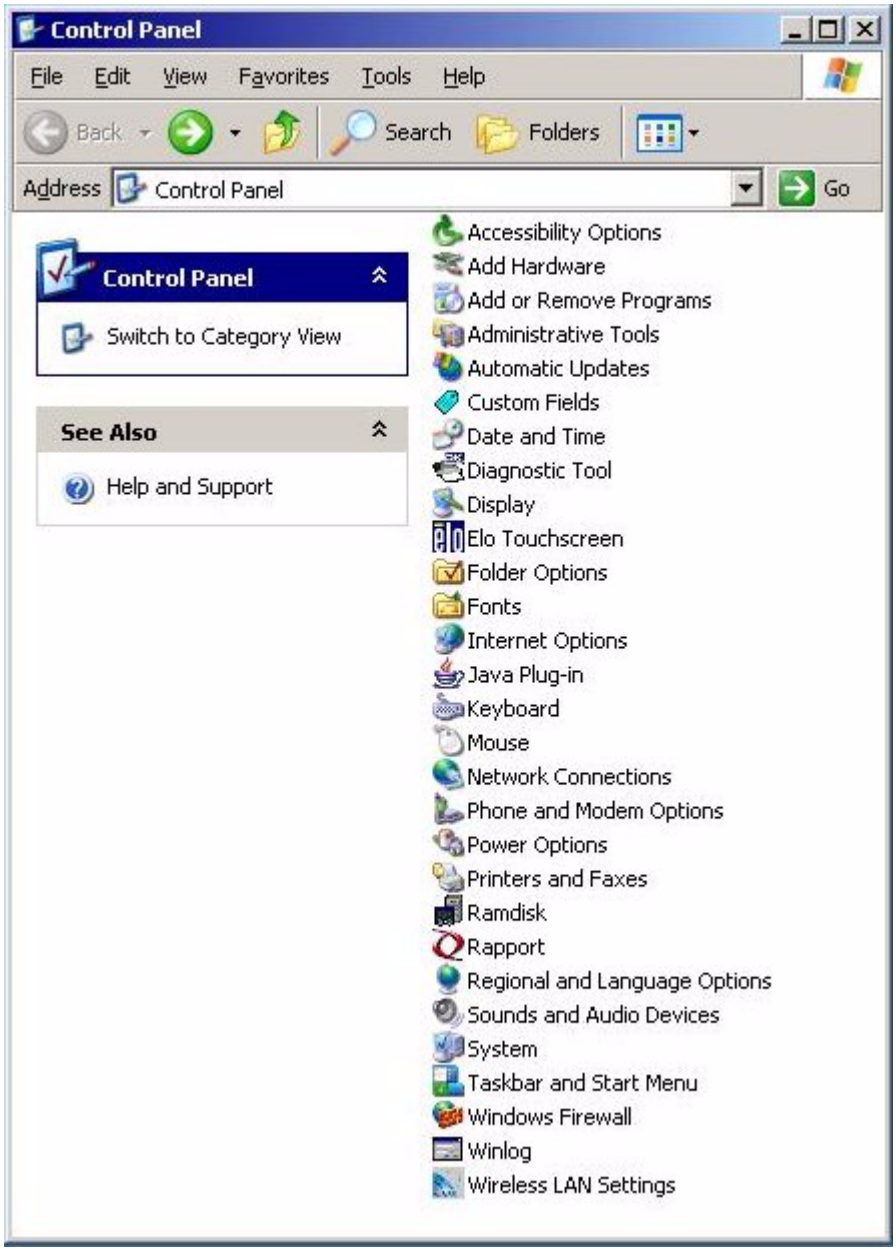
Figure 17 WinVNC: Current User Properties dialog box



Control Panel Extended Selections

Clicking **Start | Settings | Control Panel** opens the Control Panel window (the administrator Control Panel contains extended selections).

Figure 18 Administrator Control Panel window (Classic View/List)



Notable extended selections available on the administrators Control Panel include:

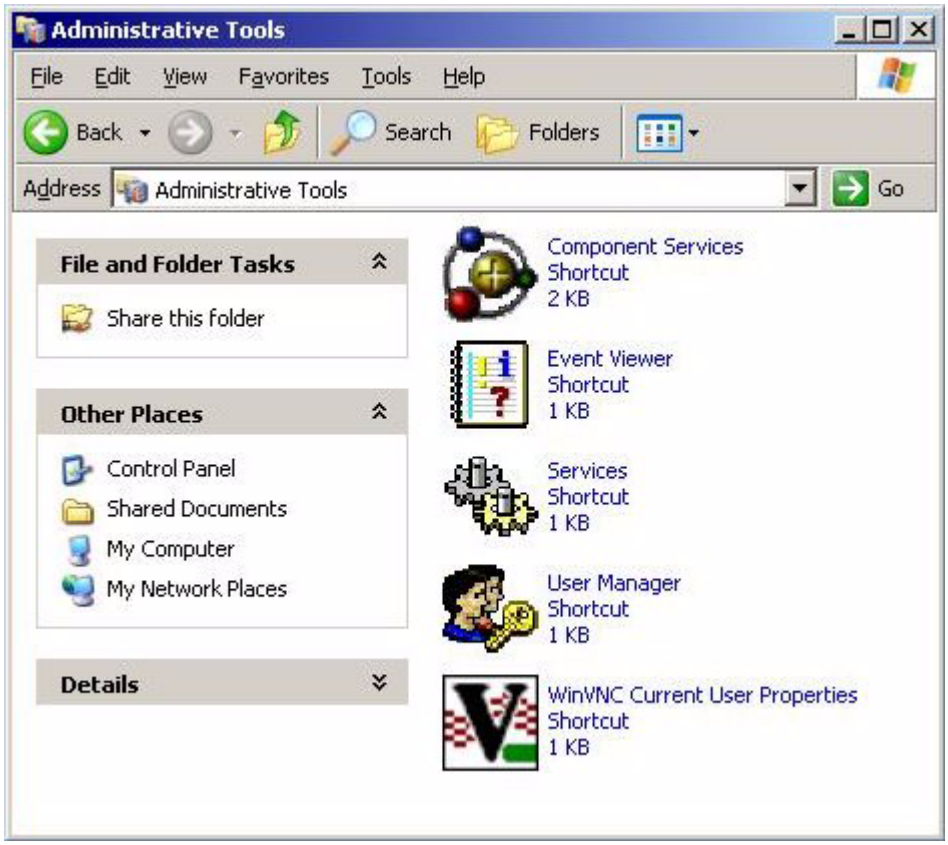
- “Administrative Tools” on page 32
- “Custom Fields” on page 36
- “ELO Touchscreen” on page 37
- “Sun Java Runtime Environment” on page 37

- “RAMdisk” on page 37
- “Rapport” on page 39
- “Regional and Language Options” on page 39
- “Winlog” on page 40
- “Wireless LAN Settings” on page 41

Administrative Tools

Double-clicking the **Administrative Tools** icon in the Control Panel opens the Administrative Tools window.

Figure 19 Administrative Tools window



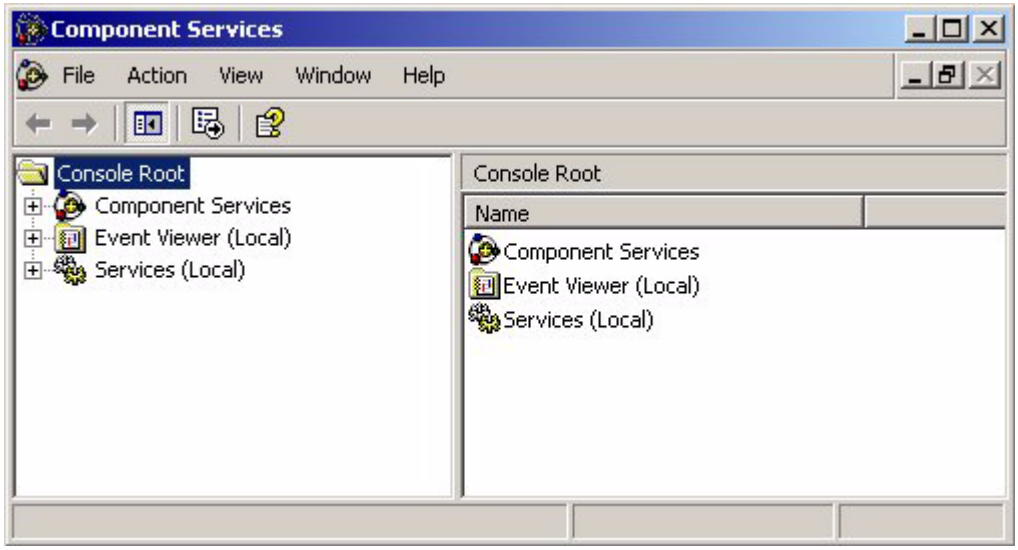
The Administrative Tools dialog box contains the following administrative tool selections:

- “Component Services” on page 33
- “Event Viewer” on page 33
- “Services” on page 34
- “User Manager” on page 35
- “WinVNC Current User Properties” on page 35

Component Services

Double-clicking the **Component Services** icon opens the Component Services window. The console allows access to configure the Component Services, Event Viewer, and Local Services.

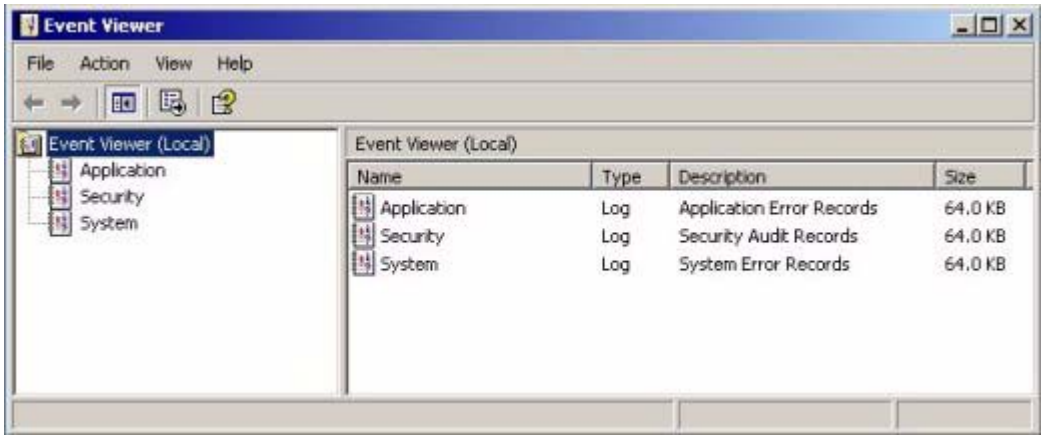
Figure 20 Component Services window



Event Viewer

Double-clicking the **Event Viewer** icon opens the Event Viewer window. This tool displays monitoring and troubleshooting messages from Windows and other programs.

Figure 21 Event Viewer window



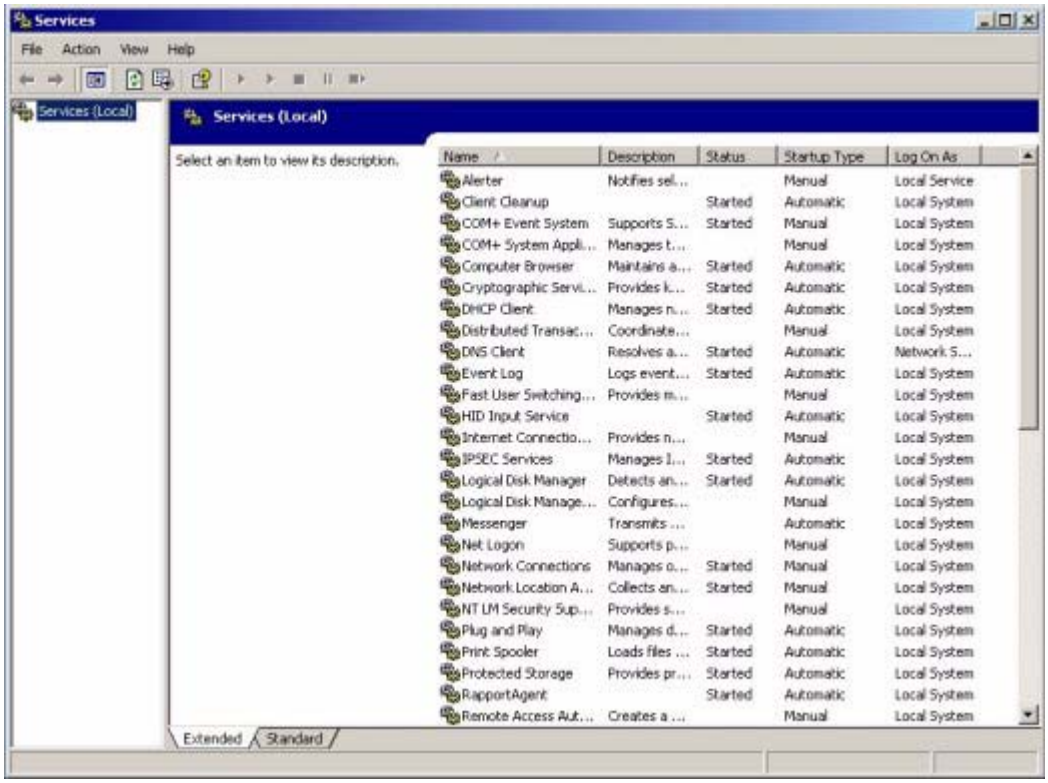
Services

Double-clicking the **Services** icon opens the Services window. The **Services** window lists the services installed on the thin client. VNC Server and Client Clean-up (NetXClean) are two services which may need to be stopped or restarted by the thin client administrator and are discussed in “Utilities and Settings” on page 43.

Note

VNC Server and Client Clean-up (NetXClean) cannot be stopped or started using the Task Manager.

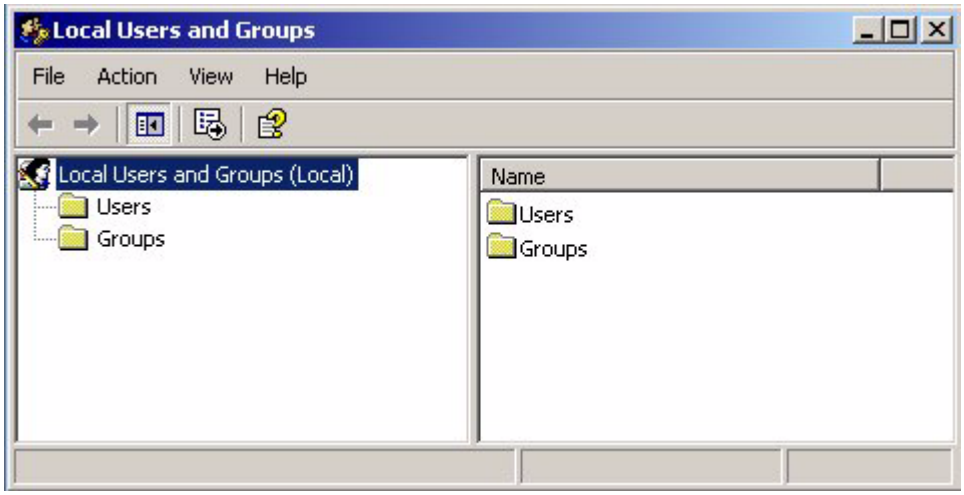
Figure 22 Services window


Services
File Action View Help
Services (Local)
Services (Local)
Select an item to view its description.
Name Description Status Startup Type Log On As
Alerter Notifies sel... Manual Local Service
Client Cleanup Started Automatic Local System
COM+ Event System Supports S... Started Manual Local System
COM+ System Appli... Manages t... Manual Local System
Computer Browser Maintains a... Started Automatic Local System
Cryptographic Servi... Provides k... Started Automatic Local System
DHCP Client Manages n... Started Automatic Local System
Distributed Transac... Coordinate... Manual Local System
DNS Client Resolves a... Started Automatic Network S...
Event Log Logs event... Started Automatic Local System
Fast User Switching... Provides m... Manual Local System
HID Input Service Started Automatic Local System
Internet Connectio... Provides n... Manual Local System
IPSEC Services Manages I... Started Automatic Local System
Logical Disk Manager Detects an... Started Automatic Local System
Logical Disk Manage... Configures... Manual Local System
Messenger Transmits ... Automatic Local System
Net Logon Supports p... Manual Local System
Network Connections Manages o... Started Manual Local System
Network Location A... Collects an... Started Manual Local System
NT LM Security Sup... Provides s... Manual Local System
Plug and Play Manages d... Started Automatic Local System
Print Spooler Loads files ... Started Automatic Local System
Protected Storage Provides pr... Started Automatic Local System
RapportAgent Started Automatic Local System
Remote Access Aut... Creates a ... Manual Local System
Extended Standard

User Manager

Double-clicking the **User Manager** icon opens the Local Users and Groups window. This tool allows administrators to manage users and groups. For detailed information on the User Manager, refer to “User Manager” on page 55.

Figure 23 Local Users and Groups window



WinVNC Current User Properties

Double-clicking the **WinVNC Current User Properties** icon opens the WinVNC: Current User Properties dialog box.

Note

This dialog box can also be opened from the administrator **Start** | **Programs** menu (or by double-clicking the icon in the administrator system tray).

Figure 24 WinVNC: Current User Properties dialog box

Use this dialog box to enter the VNC log-on password (the default password is `Wyse`), and to select the parameters for the VNC server utility installed on a user thin client.

VNC server allows the user thin client to be operated/monitored (shadowed) from a remote machine on which VNC Viewer is installed. VNC is intended primarily for support and troubleshooting purposes.

Note

Hovering the mouse pointer over the VNC icon on the taskbar shows the current IP address of the thin client.

For information on VNC user settings, refer to “WinVNC” on page 60.

Custom Fields

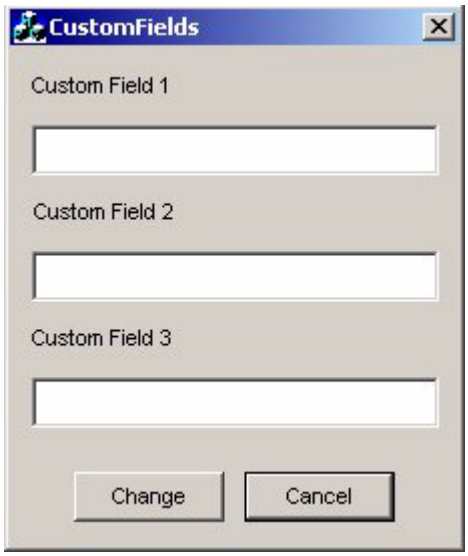
Double-clicking the **Custom Fields** icon in the Control Panel opens the Custom Fields dialog box. Use this dialog box to enter configuration strings for use by the Rapport® Remote Administrative Software. The configuration strings can contain information about the location, user, administrator, and so on.

Clicking **Change** in the dialog box transfers the custom field information to the Windows registry. The information is then available to the Rapport® Client Manager. To permanently save the information, flush the Enhanced Write Filter cache during the system session in which the registry entries are made or changed.

For more information on the Rapport Remote Administrative Software, refer to “Remote Administration and Firmware Upgrades” on page 58.

For details on using custom field information, refer to the Rapport documentation.

Figure 25 Custom Fields dialog box



ELO Touchscreen

If the ELO Touchscreen option is installed on the thin client, double-clicking the **ELO Touchscreen** icon in the Control Panel allows you to calibrate and customize the settings for a touchscreen monitor that is connected to the thin client (or when ELO Touchscreen is integrated with Model 9650XE).

Note

The ELO Touchscreen icon is available in the control panel of both the user and the administrator desktops.

The ELO Touchscreen option may require re-calibration and adjustment of the screen settings (particularly for Model 9650XE) if the thin client is updated with a new firmware image.

Sun Java Runtime Environment

Sun Java Runtime Environment (JRE) is available but does not include the Microsoft Virtual Machine. Information regarding this application can be found online at: http://java.sun.com.

RAMdisk

The RAMdisk is volatile memory space set aside for temporary data storage. It is the Z drive shown in the My Computer window.

The following items are stored on the RAMdisk:

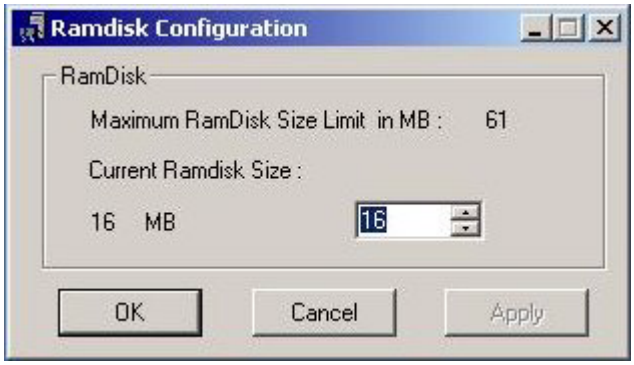
- Browser Web page cache
- Browser history
- Browser cookies
- Browser cache
- Temporary Internet files

- Print spooling
- User/system temporary files
- ICA bitmap cache

The RAMdisk can also be used for temporary storage of other data according to administrator discretion (see “Local Drives” on page 51).

Double-clicking the **RAMdisk** icon in the Control Panel opens the Ramdisk Configuration dialog box. Use this dialog box to configure the RAMdisk size. If you change the size of the RAMdisk, you will be prompted to restart the system for the changes to take effect. However, to permanently save the changes be sure that the Enhanced Write Filter cache has been flushed during the current system session before restarting the system.

Figure 26 Ramdisk Configuration dialog box



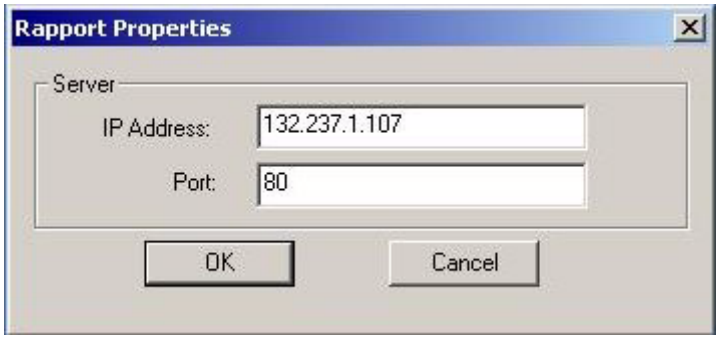
Note

Depending on the thin client model and installed memory size, default RAMdisk size may vary. The the minimum RAMdisk size that can be set is 2 MB; maximum RAMdisk size that can be set is approximately 25% of actual RAM (for example, a system with 512 MB of RAM can have a maximum RAMdisk of 125 MB).

Rapport

Double-clicking the **Rapport** icon in the Control Panel opens the Rapport Properties dialog box. Use this dialog box to configure the Rapport settings.

Figure 27 Rapport Properties dialog box



To configure the Rapport settings:

1. Enter the Rapport Server hostname or IP address in the IP Address text box.
2. Enter the port to use in the Port text box.
3. Click **OK**.

Regional and Language Options

Double-clicking the **Regional and Language Options** icon in the Control Panel opens the Regional and Language Options dialog box. Use this dialog box to select your keyboard language. The following keyboard languages are supported:

Arabic	Finnish	Romanian
Belgian Dutch	French	Russian
Belgian French	German	Slovak
Brazilian (ABNT)+A34	Greek	Slovenian
Canadian Eng. (Multi)	Hebrew	Spanish
Canadian Fr (Multi)	Hungarian	Spanish Variation
Canadian French	Italian	Swedish
Czech	Italian (142)	Swiss French
Croatian	Latin American	Swiss German
Danish	Norwegian	Thailand
Dutch	Polish (214)	Turkish-F
English (UK)	Polish (Programmers)	Turkish-Q
English (US) (default)	Portuguese	US International

Note

A language appropriate keyboard is required for any language other than English (US). Keyboards are different for each of the languages listed.

The default language for the user interface is English (US). If your thin client contains a multi-language build and you want to change to another language, complete the following procedures:

1. Click **Start | Settings | Control Panel**.
2. Double-click the **Regional and Language Option** icon to open the Regional and Language Options dialog box.
3. Click the **Languages** tab.
4. Select a language from the Language used in menus and dialogs list box, and click **Apply**.

   A message informs you that changes will not take effect until you logoff and logon again.
5. Click **OK**.
6. In the Regional and Language Options dialog box, click **OK** and then close the Control Panel.
7. Log off the current user.

   The next time the user logs on, the GUI will be in the selected language.

Note

For more information on multi-language builds, go to: http://www.wyse.com.
The keyboard layout does not automatically change with the GUI changes. It must be changed manually.
Third-party applications, Wyse applications, and Microsoft names remain in English after the interface is changed.

Winlog

The default for the thin client is automatic log-on. Double-clicking the **Winlog** icon in the administrator Control Panel opens the Winlog dialog box. Use this dialog box to enable or disable auto logon, and change the auto logon user name, password, and domain. Only the administrator logon account can change auto-logon properties.

Note

To save the changes, be sure to flush the Enhanced Write Filter cache at any time during the current system session. For information about the Enhanced Write Filter and procedures for flushing the cache, refer to “Enhanced Write Filter” on page 43.

Wireless LAN Settings

If Wyse USB 802.11b hardware is installed on the thin client, double-clicking the **Wireless LAN Settings** icon in the administrator Control Panel allows you to customize wireless LAN settings (such as the wireless network ID, and so on).

Note

The Wireless LAN Settings icon is available only in the administrator Control Panel and is for the specific Actiontec USB wireless device only.
The wireless LAN settings made using this icon are not applied to any other wireless cards (such as Cisco 350 and Orinoco Silver).
Any non-Actiontec adapters must be configured through **Start | Control Panel | Network Connections** or through the device manager.

Peripherals

Depending on the ports available on the thin client (see “Model Summary” on page 4), the thin client can provide services through a USB port, a serial port, an LPT port, or a PCMCIA card plugged-in to the back of the thin client (if the appropriate software is installed).

Add-ons for other services (available from Wyse) can be installed using Rapport Remote Administrative Software. For information on using Rapport Remote Administrative Software, refer to “Remote Administration and Firmware Upgrades” on page 58.

Printers

A universal print driver is installed on the thin client to support text-only printing to a locally-connected printer.

To print full text and graphics to a locally-connected printer, install the driver provided by the manufacturer according to the instructions. Be sure to flush the Enhanced Write Filter cache to save the installation. For procedures on flushing the cache, refer to “Enhanced Write Filter” on page 43.

Printing to network printers from ICA and RDP applications can be achieved through print drivers on the servers.

Note

Printing to a locally-connected printer from an ICA or RDP session using the print drivers of the server produces full text and graphics functionality from the printer. To do this, you must install the print driver on the server and the text only driver on the thin client according to the procedures in "Adding Printers."

Adding Printers

To install the print driver on the server and the text only driver on the thin client:

1. Connect the printer to the parallel port.
2. Click **Start** | **Settings | Printers and Faxes**.
3. Double-click **Add a printer** to open the Add Printer Wizard.

4. Click **Next** in the first window of the wizard.
5. Select the **Local printer attached to this computer** option.
6. Ensure that the **Automatically detect and install my Plug and Play printer** check box is *not* selected.
7. Click **Next**.
8. Select the **Use the following port:** option.
9. Select the appropriate port from the drop-down list and click **Next**.
10. Select the **Manufacturer** and **Model** of the printer and click **Next**.
11. Enter the assigned default name or other name for the printer and click **Next**.
12. Select the **Do not share this printer** option and click **Next**.
13. Select whether to print a test page or not and click **Next**.
14. Click **Finish**.

    The installation will complete (a test page will print if this option was selected).

Audio

Audio can be redirected from applications to the audio jacks on the thin client. The level can be controlled externally (for example, by using a 600-ohm potentiometer control), and powered speakers are recommended. The volume can also be adjusted using the sound icon in the taskbar system tray. You can single-click this icon to open the master volume control, or double-click it to open the volume control application dialog box.

Utilities and Settings

The following utilities and settings are available for administrative use:

- “Enhanced Write Filter”
- “NetXClean Utility” on page 50
- “Local Drives” on page 51
- “Mapping Network Drives” on page 52
- “Domain Participation” on page 52
- “WinPing Utility” on page 54
- “Net and Tracert Utilities” on page 54
- “User Manager” on page 55
- “Changing the Computer Name” on page 57

Enhanced Write Filter

The Enhanced Write Filter provides a secure environment for thin-client computing by protecting the thin client from undesired flash memory writes (flash memory is where the operating system and functional software components reside). By preventing excessive flash write activity, the Enhanced Write Filter also extends the life of the thin client. It gives the appearance of read-write access to the flash by employing a cache to intercept all flash writes and returning success to the process that requested the I/O.

The intercepted flash writes stored in cache are available as long as the thin client remains active but are lost when the thin client is restarted or switched off. To preserve the results of writes to the registry, favorites, cookies, and so on, the contents of the cache can be transferred (flushed) to the flash on demand by the Rapport Administrative Software or manually using the Enhanced Write Filter Control dialog box (see “Enhanced Write Filter Control Dialog Box” on page 48). It can be opened either through the **Start | Run** command line (`ewfmgr.exe C:`) or by double-clicking the EWF icon in the administrator system tray. After the Enhanced Write Filter has flushed the cache, all future writes during the current system session are written to the flash, with no further caching until a system restart occurs. The Enhanced Write Filter can also be enabled/disabled through the command line or through the Enhanced Write Filter Enable/Disable desktop icons. The status (enabled/disabled) of the Enhanced Write Filter is displayed by the Enhanced Write Filter status icon on the taskbar system tray (green indicates that the Enhanced Write Filter is enabled, yellow indicates that the Enhanced Write Filter is in transition and will change on the next system start, and red indicates that the Enhanced Write Filter is disabled).

Note

When administering the thin client for permanent changes:
-To avoid flash corruption, it is strongly recommended to flush the Enhanced Write Filter cache immediately following a fresh restart before making permanent modifications to the system.
-Do not flush the cache if the thin client has been used in the current system session.

Caution

The Enhanced Write Filter cache should never be flushed if it is eighty-percent or more full. The administrator should periodically check the status of the cache and restart the thin client if the cache is more than eighty percent full.

Note

A Terminal Services Client Access License (TSCAL) is always preserved regardless of Enhanced Write Filter state (enabled or disabled).
If you want to have other registry settings preserved regardless of Enhanced Write Filter state, contact support for help at http://www.wyse.com.

For procedures on using the Enhanced Write Filter, refer to:

- "Password Change with the Enhanced Write Filter"
- "Enhanced Write Filter Command Line Control" on page 46
- "Enhanced Write Filter Enable and Enhanced Write Filter Disable Desktop Icons" on page 47
- "Enhanced Write Filter Control Dialog Box" on page 48

Password Change with the Enhanced Write Filter

On Microsoft Windows NT-based computers and on Microsoft Windows 2000 or 2003-based computers, machine account passwords are regularly changed with the domain controller for security purposes. By default, on Windows NT-based computers, the machine account password automatically changes every seven days. On Windows 2000 or 2003-based computers, the machine account password automatically changes every 30 days. The same is applicable for Winterm™ 9 series Thin Clients if they are a member of a domain.

With the Enhanced Write Filter enabled, a thin client will successfully make this change with the domain controller. Because the Enhanced Write Filter is enabled, however, the next time the thin client is booted it will not retain the new password. In such cases, you can use the following options:

- Disable the machine account password change on a Winterm™ 9 series Thin Client by setting the `DisablePasswordChange` registry entry to a value of `1`.
- Disable the machine account password change in Windows NT 4.0 or in Windows 2000 or 2003, by setting the `RefusePasswordChange` registry entry to a value of `1` on all domain controllers in the domain instead of on all workstations. Winterm™ 9 series Thin Clients will still attempt to change their passwords every 30 days, but the change will be rejected by the server.

Note

On Windows NT 4.0 domain controllers, you must change the `RefusePasswordChange` registry entry to a value of `1` on all Backup Domain Controllers (BDCs) in the domain *before* you make the change on the Primary Domain Controller (PDC). Failure to follow this order will cause event ID 5722 to be logged in the event log of the PDC.
If you set the `RefusePasswordChange` registry entry in the Windows 2000 or 2003 Domain Controller to a value of `1`, the replication traffic will stop, but

not the thin client traffic. If you also set the `DisablePasswordChange` registry entry to a value of `1` in the thin client, both thin client and replication traffic will stop.

Disabling the machine account password change on a Winterm™ 9 series Thin Client

To disable the machine account password change on a Winterm™ 9 series Thin Client:

1. Start Registry Editor by clicking **Start | Run**, typing `regedit` in the Open text box, and then clicking **OK**.
2. Locate and click the following registry subkey: `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Netlogon\Parameters`
3. In the right pane, click the `DisablePasswordChange` entry.
4. On the Edit menu, click **Modify**.
5. In the Value data text box, type a value of `1`, and then click **OK**.
6. Quit the Registry Editor.

Disabling the machine account password change in Windows NT 4.0 or in Windows 2000 or 2003

To disable the machine account password change in Windows NT 4.0 or in Windows 2000 or 2003:

1. Start Registry Editor by clicking **Start | Run**, typing `regedit` in the Open text box, and then clicking **OK**.
2. Locate and click the following registry subkey: `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Netlogon\Parameters`
3. On the Edit menu, point to **New** and then click **DWORD Value**.
4. Type `RefusePasswordChange` as the registry entry name, and then click **ENTER**.
5. On the Edit menu, click **Modify**.
6. In the Value data text box, type a value of `1`, and then click **OK**.
7. Quit the Registry Editor.

Enhanced Write Filter Command Line Control

There are several **Start** | **Run** command lines you can use to control the Enhanced Write Filter.

Note
Command line arguments cannot be combined.

Caution
Thin client administrators should use NT file security to prevent undesired usage of these commands.

Use the following guidelines for the **Start** | **Run** command line option for the Enhanced Write Filter:

- **ewfmgr.exe C:**
  With no arguments - Opens the Enhanced Write Filter Control dialog box. For a description of the dialog box, refer to “Enhanced Write Filter Control Dialog Box” on page 48.
- **ewfmgr.exe C: -commit**
  Commits changes and disables the Enhanced Write Filter until the next system start. The Enhanced Write Filter status icon is yellow until the next system start.
- **ewfmgr.exe C: -disable**
  Flushes the cache and disables the Enhanced Write Filter; the Enhanced Write Filter remains disabled after the system start and must be enabled manually either through the Enhanced Write Filter Control dialog box or through the command line. The Enhanced Write Filter status icon remains red while disabled.
- **ewfmgr.exe C: -enable**
  Enhanced Write Filter enabled after the next system start. After enabling the Enhanced Write Filter you must restart. You do not need to flush the cache first since the Enhanced Write Filter is currently disabled. The Enhanced Write Filter status icon is green when the Enhanced Write Filter is enabled.

Note
The Enhanced Write Filter status icon on the taskbar system tray turns red immediately when the cache flush operation is started, although the flush action can take up to several minutes to complete.

Caution
Do not attempt to flush the cache while the cache is currently being flushed.

If you open an MS-DOS Prompt window (by entering `command` in the Run text box), append `“.exe”` to the `ewfmgr` command:
`ewfmgr.exe C:`, `ewfmgr.exe C: -commit`, `ewfmgr.exe C: -disable`, and `ewfmgr.exe C: -enable`.

Enhanced Write Filter Enable and Enhanced Write Filter Disable Desktop Icons

For convenience, the Enhanced Write Filter Enable and Enhanced Write Filter Disable icons are present on the Administrator desktop. Depending on which icon you use, you can either enable or disable the Enhanced Write Filter.

- **Enhanced Write Filter Enable Icon -** Double-clicking this icon allows you to enable the Enhanced Write Filter using the Enhanced Write Filter Control dialog box. This utility is the equivalent of running the `ewfmgr.exe C: -enable` command line option as described in “Enhanced Write Filter Command Line Control” on page 46. The Enhanced Write Filter is enabled and the system will automatically restart. You do not need to flush the cache first as the Enhanced Write Filter is currently disabled. The Enhanced Write Filter status icon in the taskbar system tray is green when the Enhanced Write Filter is enabled.
- **Enhanced Write Filter Disable Icon -** Double-clicking this icon allows you to disable the Enhanced Write Filter using the Enhanced Write Filter Control dialog box. This utility is the equivalent of running the `ewfmgr.exe C: -disable` command line option as described in “Enhanced Write Filter Command Line Control” on page 46. This flushes the cache and disables the Enhanced Write Filter. The Enhanced Write Filter remains disabled after the system start and can only be enabled using the Enhanced Write Filter Enable icon or through the command line as described in “Enhanced Write Filter Command Line Control” on page 46. The Enhanced Write Filter status icon in the taskbar system tray remains red while the Enhanced Write Filter is disabled.

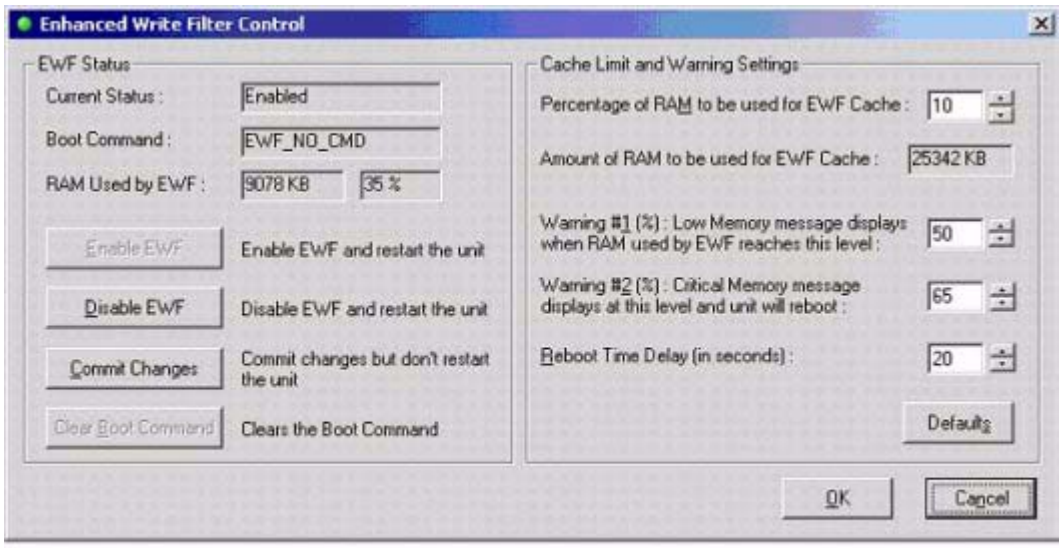
Enhanced Write Filter Control Dialog Box

The Enhanced Write Filter Control dialog box can be opened either through the **Start | Run** command line (`ewfmgr.exe C:`) or by double-clicking the EWF icon in the administrator system tray.

Note

To open the dialog box using the command line, click **Start | Run** and type `ewfmgr.exe C:` and then click **OK**.

Figure 28 Enhanced Write Filter Control dialog box


Enhanced Write Filter Control
EWF Status
Current Status :
Enabled
Boot Command :
EWF_NO_CMD
RAM Used by EWF :
9078 KB
35 %
Enable EWF
Enable EWF and restart the unit
Disable EWF
Disable EWF and restart the unit
Commit Changes
Commit changes but don't restart the unit
Clear Boot Command
Clears the Boot Command
Cache Limit and Warning Settings
Percentage of RAM to be used for EWF Cache :
10
Amount of RAM to be used for EWF Cache :
25342 KB
Warning #1 (%) : Low Memory message displays when RAM used by EWF reaches this level :
50
Warning #2 (%) : Critical Memory message displays at this level and unit will reboot :
65
Reboot Time Delay (in seconds) :
20
Defaults
OK
Cancel

When using the Enhanced Write Filter Control dialog box, follow these guidelines:

- EWF Status area includes:
  - **Current Status** - Shows the current status (Enabled or Disabled) of the Enhanced Write Filter.
  - **Boot Command** - Shows the current status (EWF_ENABLE, EWF_DISABLE, EWF_NO_CMD, or EWF_COMMIT) of the Boot Command.
  - **RAM used by EWF** - Shows the amount of RAM used (in Kilobytes and Percentage) that is currently being used by the Enhanced Write Filter. If **Current Status** is Disabled, RAM Used by EWF is always zero (0).
  - The **Enable EWF** command button allows you to commit changes, enable the Enhanced Write Filter and prompt you to restart the thin client (the **Enable EWF** command button is disabled and the **Commit Changes** command button is enabled when the Enhanced Write Filter is currently enabled). If you do not restart the thin client, the changes made will not be saved until the thin client is restarted.

Note

After the system restarts to enable the Enhanced Write Filter, the Enhanced Write Filter status icon (in the desktop system tray) turns green.

  - The **Disable EWF** command button allows you to flush the cache, disable the Enhanced Write Filter, and prompt you to restart the thin client (the **Disable EWF**

command button and the **Commit Changes** command button are disabled when the Enhanced Write Filter is currently disabled). If you do not restart the thin client, the changes made will not be saved until the thin client is restarted.

Note

After flushing the cache and disabling the Enhanced Write Filter, the Enhanced Write Filter status icon (in the desktop system tray) turns red and the Enhanced Write Filter remains disabled after the system restarts.

- The **Commit Changes** command button allows you to run the EWF_COMMIT Boot Command. The system will not restart the thin client and the changes are not committed until an administrator restarts the thin client manually.
- The **Clear Boot Command** command button allows you to clear the current Boot command. If there is no Boot Command pending (that is, the Boot Command status is EWF_NO_CMD), then the Clear Boot Command button is disabled.

- Cache Limit and Warning Settings area includes:
  - **Percentage of RAM to be used for EWF Cache** - Shows the percentage of RAM that is to be used as Enhanced Write Filter cache (Default value = 15; Minimum value = 10; Maximum value = 35).
  - **Amount of RAM to be used for EWF Cache** - Shows (in KB) the amount of RAM (in KB) that is to be used as Enhanced Write Filter cache. The value is calculated based on the following formula: Amount of RAM to be used for EWF Cache = Total Available Physical RAM multiplied by the Percentage of RAM to be used.
  - **Warning #1 (%)** - Shows the EWF cache percentage value at which a Low Memory warning message will be displayed to the user (Default value = 85, Minimum value = 50, Maximum value = 90).
  - **Warning #2 (%)** - Shows the EWF cache percentage value at which a Critical Memory warning message will be displayed to the user, along with another message display counting down the number of seconds before automatic rebooting will occur (Default value = 95, Minimum value = 55, Maximum value = 95).
  - **Reboot Time Delay (in seconds)** - Shows the number of seconds that will lapse before system reboot in the **Warning #2 (%)** case of cache overflow.
  - The **Defaults** command button allows you to reset the four Cache Limit and Warning Settings area setting fields to their default values.

Note

The **OK** command button allows you to close the Enhanced Write Filter Control dialog box and store (in the registry) any changes made to the dialog box settings. The **Cancel** command button allows you to close the Enhanced Write Filter Control dialog box without storing any changes made to the dialog box settings.

NetXClean Utility

NetXClean keeps extraneous information from being stored in flash memory. NetXClean is a service that runs in the background and operates on the flash memory only. NetXClean clean-up is triggered on either service startup or user log off. It performs the clean-up invisibly and no user input is necessary.

NetXClean prevents garbage files from building up and filling the free space in the flash; for example, if a flush of the Enhanced Write Filter cache puts junk in flash directories that must be kept clean or allows junk to continue being written to flash after the Enhanced Write Filter cache is flushed (until a restart occurs). The NetXClean utility is particularly important when multiple users have log-on rights to a thin client, as memory space can be quickly used by locally stored profiles and temporary caching of information.

Function Summary

NetXClean TweakUI functions includes clearing:

- Run history at log-on
- Document history at log-on
- Find Files history at log-on
- Find Computer history at log-on
- Internet Explorer history at log-on
- Last User at log-on
- Selected Items Now

NetXClean purges selected directories, files, and profiles. It uses a configuration file to determine which directories and files to purge, and what not to purge. To select different directories and files to purge, you must select them in the configuration file.

Caution

The selections are made by the manufacturer and should not be changed without manufacturer supervision.

Regardless of the configuration file selections, NetXClean does not clean any of the following directories or their parent directories:

- Windows directory
- Windows System subdirectory
- Current directory in which the service is installed

NetXClean will not delete the following profiles:

- Administrator
- All Users
- Default User
- The profile of the last user who logged on

Local Drives

Administrators need to know the following information about local drives.

Drive Z

Drive Z is onboard volatile memory (`Ms-ramdrive`) of the thin client. Because drive Z is volatile memory, it is recommended that you do not use this drive to save data that you want to retain.

For Ramdisk configuration information, refer to “Peripherals” on page 41.

For information about using the Z drive for roaming profiles, refer to “Domain Participation” on page 52.

Drive C and Flash

Drive C is onboard non-volatile flash memory. It is recommended that you avoid writing to drive C. Writing to drive C reduces the size of the flash. If the flash size is reduced to under 3 MB, the thin client will become unstable.

Caution

If the free flash memory size is reduced to 2 MB, the thin client image will be irreparably damaged and it will be necessary for you to contact an authorized service center to repair the thin client. It is highly recommended that 3 MB of flash memory be left unused.

The Enhanced Write Filter (if ENABLED) protects the flash from damage and presents an error message if the cache is overwritten. However, if this message occurs you will be unable to flush the Enhanced Write Filter cache and any thin client configuration changes still in cache will be lost.

Note

For information on the role of NetXClean in keeping the flash memory clean, refer to “NetXClean Utility” on page 50.

Items that are written to the Enhanced Write Filter cache (or directly to the flash if the Enhanced Write Filter has been flushed) during normal operations include:

- Favorites
- Created connections
- Delete/edit connections

Saving Files

The thin client uses an embedded operating system with a fixed amount of flash memory. It is recommended that you save files that you want to keep on a server rather than on your thin client.

Caution

Be careful of application settings that write to the C drive, which resides in flash memory (in particular, those applications which by default write cache files to the C drive on the local system). If you *must* write to a local drive, change the application settings to use the Z drive. The default configuration settings mentioned in “User Manager” on page 55 minimize writing to the C drive for factory-installed applications.

Note

For descriptions of the Enhanced Write Filter and the need to flush the cache to permanently save configuration data, refer to “Enhanced Write Filter” on page 43.

Mapping Network Drives

You can map network drives while logged on as either an administrator or a user. To keep the mappings after the thin client is restarted you must complete the following procedures:

- Select the **Reconnect at logon** check box.
- Flush the Enhanced Write Filter cache during the current system session.

Since a user log-on cannot flush the Enhanced Write Filter cache, the mappings can be retained by logging off the user (*do not* shut down or restart the system) and logging back on as an administrator, and then flushing the cache.

A remote home directory can also be assigned by using a user manager utility or by other means known to administrators.

Domain Participation

You can participate in domains by joining to a domain or by using roaming profiles.

Joining a Domain

As an administrator you can join a thin client to a domain through the Computer Name Changes dialog box. To open the Computer Name Changes dialog box, click **Control Panel** | **System** | **Computer Name** | **Change**.

Caution

Exercise caution when joining a domain as the profile downloaded at log-on could overflow the cache or flash memory.

When joining a domain, the Enhanced Write Filter should be disabled so that the domain information can be permanently stored on the thin client. The Enhanced Write Filter should remain disabled through the next boot as information is written to the thin client on the boot after joining the domain. This is especially important when joining an Active

Directory domain. For instructions on disabling and enabling the Enhanced Write Filter, refer to “Enhanced Write Filter” on page 43.

To make the domain changes permanent, complete the following steps:

1. Disable the Enhanced Write Filter.
2. Join the domain.
3. Reboot the thin client.
4. Enable the Enhanced Write Filter.
5. Reboot the thin client.

Note

If you use the Enable Desktop Icon to enable the Enhanced Write Filter, the second reboot will happen automatically.

Note

By default, the NetXClean utility will purge all but specifically selected profiles on the system when the thin client starts up or when the user logs off. For information on how to ensure a new profile is not purged by the NetXClean utility, refer to “NetXClean Utility” on page 50.

Roaming Profiles

Write roaming profiles to the C drive. The profiles must be limited in size and will not be retained when the thin client is restarted.

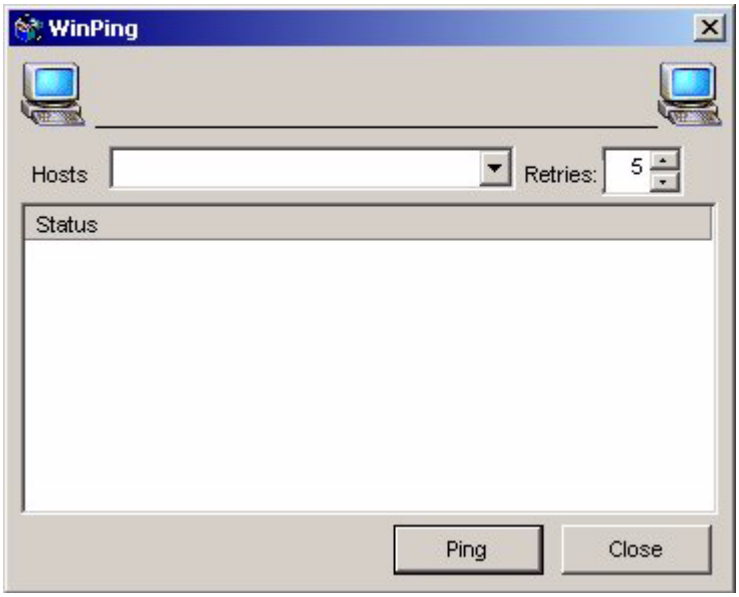
Note

For roaming profiles to work and be downloaded, there must be sufficient flash space available. In some cases it may be necessary to remove software components to free space for roaming profiles.

WinPing Utility

To open the WinPing window, click **Start** | **Run**, type `WinPing` in the text field, and click **OK**. The WinPing window is used to launch the Windows PING (Packet InterNet Groper) diagnostic utility and view the results from pinging.

Figure 29 WinPing window



WinPing is a diagnostic tool familiar to administrators. It sends an echo request to a network host. The host parameter is either a valid host name or an IP address. If the host is operational and on the network, it responds to the echo request. The default is to send 5 echo requests and then stop if no response is detected. WinPing sends one echo request per second, calculates round trip times and packet loss statistics, and displays a brief summary upon completion.

WinPing is used to:

- Determine the status of the network and various hosts.
- Track and isolate hardware and software problems.
- Test, measure, and manage networks.
- Determine the IP address of a host if only the host name is known.

Net and Tracert Utilities

Net and Tracert utilities are available for administrative use. For more information on these utilities, go to: http://www.microsoft.com.

User Manager

The User Manager allows administrators to create new user accounts and configure user profiles. It also allows administrators to create new groups and determine group membership.

By default, a new user is only a member of the Users group and is not locked down. You, as the administrator, must select the attributes and profile settings for a new user.

Caution

By default, all application settings are set to cache to C drive. It is highly recommended that you cache to the Ramdisk Z drive (as is pre-set in the User and Administrator accounts) to avoid overflowing the Enhanced Write Filter cache.

Creating New User Accounts

New user accounts can be created by using the User Manager. You must be logged-on as an administrator to create new user accounts. You can create user accounts locally or remotely through VNC. However, due to local flash/disk space constraints, the number of additional users should be kept to a minimum.

Caution

Be sure to flush the Enhanced Write Filter cache during the current system session in which a new account is created.

To create a new user:

1. Log-in as an administrator.
2. Click **Start | Settings | Control Panel | Administrative Tools**, and then double-click the **User Manager** icon to open the Local Users and Groups window.
3. Click the **Users** folder to view the contents in the right pane.
4. Click **Action** in the menu bar, and then click **New User** to open the New User dialog box.
5. Type in the user name and password, and then select the attributes you want for the user.
6. Click **Create**.
7. Click **Close**.

Configuring User Profiles

Only an administrator can select the profile settings for a user. For example, new users cannot put themselves into the Administrators group, only the administrator can add a user to the Administrators group.

Caution

Because of the limited size of the flash memory, it is strongly recommended that other applications available to new and existing users be configured to prevent writing to the local file system. For the same reason, it is also

recommended that *extreme care be exercised when changing configuration settings of the factory-installed applications.*

To add a user to the Administrators group:

1. Log-in as an administrator.
2. Click **Start | Settings | Control Panel | Administrative Tools**, and then double-click the **User Manager** icon to open the Local Users and Groups window.
3. In the Local Users and Groups window, select (highlight) the **Users** folder in the left pane.
4. In the right pane of the Local Users and Groups window, double-click the name of the user to open the [user name] Properties dialog box.
5. Click the **Member Of** tab.
6. Click **Add** to open the Select Groups dialog box.
7. Type `Administrators` in the Enter the object names to select field to enable the **Check Names** command button.
8. Click **Check Names**, and then click **OK**.

   The user will now be a member of both the Administrators and Users groups.
9. Flush the cache to retain this change.

Creating New Groups

New groups can be created by using the User Manager. You must be logged-on as an administrator to create new groups. You can create groups locally or remotely through VNC. However, due to local flash/disk space constraints, the number of additional groups should be kept to a minimum.

Caution

Be sure to flush the Enhanced Write Filter cache during the current system session in which a new group is created.

To create a new group:

1. Log-in as an administrator.
2. Click **Start | Settings | Control Panel | Administrative Tools**, and then double-click the **User Manager** icon to open the Local Users and Groups window.
3. Click the **Groups** folder to view the contents in the right pane.
4. Click **Action** in the menu bar, and then click **New Group** to open the New Group dialog box.
5. Type in the group name and description.
6. Click **Create**.
7. Click **Close**.

Determining Group Membership

Only an administrator can determine group membership. For example, new users cannot put themselves into the Administrators group, only the administrator can add a user to the Administrators group.

To add a member to the Administrators group:

1. Log-in as an administrator.
2. Click **Start | Settings | Control Panel | Administrative Tools**, and then double-click the **User Manager** icon to open the Local Users and Groups window.
3. In the Local Users and Groups window, select (highlight) the **Groups** folder in the left pane.
4. In the right pane of the Local Users and Groups window, double-click the Administrators group to open the [group name] Properties dialog box.
5. Click **Add** to open the Select Users dialog box.
6. Type the name of the user you want to add in the Enter the object names to select field to enable the **Check Names** command button.
7. Click **Check Names**, and then click **OK**.

   The user will now be a member of the Administrators group.
8. Flush the cache to retain this change.

Changing the Computer Name

You can change the computer name of the thin client if you are logged-on as an administrator.

Note

The computer name information and the Terminal Services Client Access License (TSCAL) are preserved regardless of the Enhanced Write Filter state (enabled or disabled). This maintains the specific computer identity information and facilitates the image management of the thin client.

To change the computer name of the thin client:

1. Click **Start | Settings | Control Panel | System** to open the System Properties window.
2. Click the **Computer Name** tab.
3. Click **Change...** in the dialog box.
4. Change the computer name in the text field provided.
5. Click **OK**.

Remote Administration and Firmware Upgrades

Administrators need to know the following information on remote administration and firmware upgrades:

- “Wyse Rapport Version 4.4.x”
- “Add-on Modules”
- “Firmware Upgrades”
- “User Instructions on the First Boot Process After Loading a Standard Image (v2.2 or Earlier Only)” on page 59
- “WinVNC” on page 60

Wyse Rapport Version 4.4.x

Rapport is a full-featured remote administration tool set available from Wyse Technology. It accesses the thin client through the Rapport Agent, PXE, and VNC server utilities installed on the thin client. Rapport allows the thin client administration functions (including firmware upgrades) to be performed without requiring an administrator to visit the individual thin client sites.

For specific information on using Rapport, consult the Rapport help documentation.

For local custom fields that can be accessed by Rapport, refer to “Custom Fields” on page 36.

Note

When performing a mass distribution of a custom device image created with Rapport, the source device image will require unique preparation prior to creation and distribution. Please contact the device manufacturer for more detailed information.

Add-on Modules

To install an add-on module, an administrator must use the built-in Rapport Agent, PXE, and VNC server utilities of the thin client. Disable the Enhanced Write Filter and enable the Enhanced Write Filter as needed to save the changes.

Firmware Upgrades

Intel's Preboot Execution Environment (PXE) is a protocol that defines interaction between TCP/IP, DHCP and TFTP to enable a client to download a preboot environment from a server.

The PXE client is installed on the thin client while the PXE server component is part of the Rapport Administrative Software suite.

Note

Citrix ICA auto update does not function for the ICA client installed on the thin client; updates are implemented through the standard firmware upgrade process. The thin client does not support upgrading using the Microsoft Windows update Web site.

User Instructions on the First Boot Process After Loading a Standard Image (v2.2 or Earlier Only)

If you are running version 2.2 or earlier, you must follow these important instructions when imaging the Winterm™ 9 series Thin Clients with the standard XPe image downloaded from the Wyse Web site.

Note

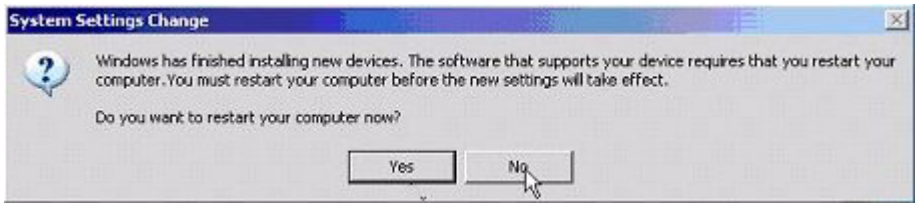
When performing a mass distribution of a custom device image that has been created with Rapport, certain devices will require unique preparation prior to image creation and distribution. Please contact the device manufacturer for more detailed information.

The Winterm™ 9 series Thin Clients automatically run through the configuration steps on first boot after imaging. Failure to follow these instructions may result in system corruption. You must not close the DOS window that is present during the process; the DOS window will close automatically.

Event: The System Settings Change message may appear shortly after the first boot, depending on the specific hardware configuration of the thin client.

- The New Hardware Found message displays in the system tray (lower right hand corner of the screen).
- The System Settings Change message prompts for a system restart.

Figure 30 System Settings Change message


System Settings Change
Windows has finished installing new devices. The software that supports your device requires that you restart your computer. You must restart your computer before the new settings will take effect.
Do you want to restart your computer now?
Yes
No

Action: If this System Settings Change message appears, click **No**. Do not interrupt the thin client while it is automatically running through configuration and reboot.

WinVNC

Administrators Only - WinVNC Server is installed locally on the thin client. It allows a thin client to be operated/monitored (shadowed) from a remote machine on which VNC Viewer is installed. VNC is intended primarily for support and troubleshooting purposes.

VNC Server starts automatically as a service at thin client startup. The service can be stopped/started by using the Services window (**Start | Settings | Control Panel | Administrative Tools | Services**).

Note

Be sure to flush the Enhanced Write Filter during the current system session if you want to permanently save the state of the service.

VNC Server Properties Settings

To open the WinVNC: Current User Properties dialog box, click **Start | Programs | WinVNC Current User Properties**, or double-click the **WinVNC** icon in the system tray of the administrator taskbar. The default password in this dialog box is `Wyse`.

Caution

The default password permits a remote administrator to configure or reset a thin client from a remote location rather than making a personal appearance at the thin client site. For security, it is highly recommended that the password be changed immediately upon receipt of the thin client.

Figure 31 WinVNC: Current User Properties dialog box

Before a remote machine (on which VNC Viewer is installed) can access a thin client:

- The IP address (or valid DNS name) of the thin client (the desktop that is to be operated/monitored) must be given to the remote administrator/user.
  The IP Address can be obtained from the Details area (Local Area Connection) of the Network Connections dialog box (accessed by clicking **Start** | **Settings** | **Network**

Connections, clicking the **Local Area Connection** icon and scrolling down to the Details area in the left pane).

Note

You can obtain the IP Address of an administrator thin client by hovering the mouse arrow over the VNC icon in the system tray of the administrator taskbar.
A password for the administrator to use must be entered into the WinVNC: Current User Properties dialog box.
For the WinVNC: Current User Properties dialog box option details, refer to the VNC Web site.

VNC Viewer Setup and Operation

VNC Viewer software is included as a component of the Rapport Administrative Software suite and must be installed on the remote (shadowing) machine. The administrator/user of the remote machine must know the IP address/name and the password of a thin client (the desktop that is to be operated/monitored).

If another machine is to be used to access your thin client, the VNC Viewer software for Unix/Linux and Win32 (Windows 95 and Windows NT) is available at no charge and can be downloaded for installation on the remote machine from: http://www.uk.research.att.com/vnc/.

Note

Detailed information on setting up and using VNC is available at the VNC Web site.

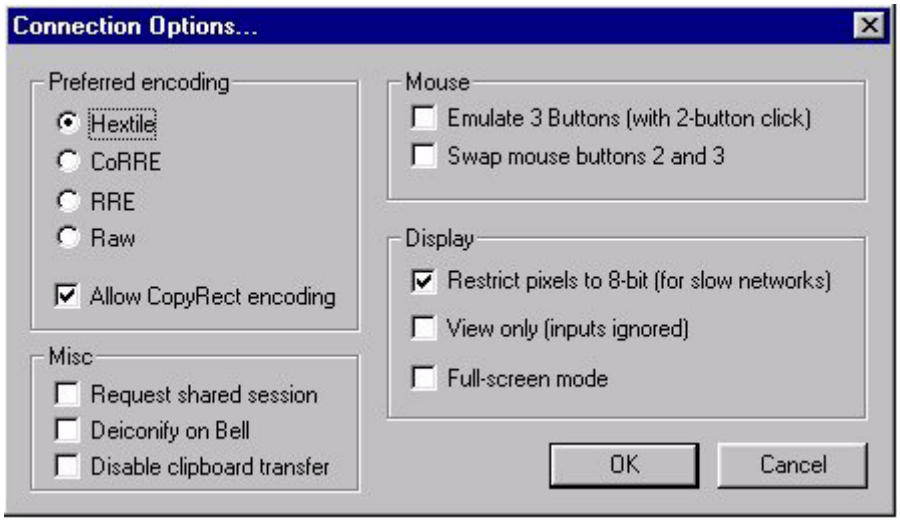
The administrator/user of the remote (shadowing) machine can log-on to a thin client by completing the following procedures:

1. Double-click the **VNC Viewer** icon to open the Connection Details dialog box.

Figure 32 VNC Connection Details dialog box

2. (Optional) If the network is slow, click **Options...** to open the Connection Options dialog box.
3. (Optional) Select the **Restrict Pixels to 8-bit** check box in the Display area (this increases speed at the expense of display quality), and click **OK** to return to the Connection Details dialog box.

Figure 33 VNC Connection Options dialog box



Note

The VNC Connection Options dialog box varies for different VNC software releases. Use the general guidelines in Table 1 to configure the VNC Connection Options dialog box.

Table 1 VNC Connection Options dialog box guidelines

Selection	Description
Preferred encoding radio buttons	Normally the VNC viewer requests CopyRect, Hextile, CoRRE and RRE in that order. The selection alters this behavior by specifying the encoding method to be used before any of the others are tried.
Preferred encoding check box	
Allow CopyRect encoding	When selected, VNC viewer informs the VNC server it can cope with CopyRect encoding.
Misc check boxes	
Request shared session	When you make a connection to a VNC server, all other existing connections are normally closed. This option requests that they be left open, allowing you to share the desktop with someone already using it.
Deiconify on Bell	Often a beep will sound because you are being notified of something such as e-mail arriving or a compilation finishing. This selection causes a minimized VNC viewer to be restored when the bell character (escape sequence) is received.

Table 1 VNC Connection Options dialog box guidelines, Continued

Selection	Description
Disable clipboard transfer	Clipboard changes caused by cutting or copying at either the viewer of server are normally transferred to the other end. This option disables clipboard transfers.
Mouse check boxes	
Emulate 3 Buttons (with 2-button click)	Users with a two-button mouse can emulate a middle button by clicking both buttons at once if this option is selected.
Swap mouse buttons 2 and 3	Generally selected by left-handed persons.
Display check boxes	
Restrict pixels to 8-bit (for slow networks)	Trade-off of color depth for transmission speed.
View only	Select this option if you only want to monitor the desktop of the remote thin client but do not want to operate it using the keyboard and mouse.
Full-screen mode	Causes the connection to start in full-screen mode.

4. In the VNC server text field, type the IP address or valid DNS name of the (the desktop that is to be operated/monitored) thin client followed by a colon and 0. For example:

   ```
   snoopy:0
   ```

   or

   ```
   132.237.16.238:0
   ```

5. Click **OK** to open the VNC Authentication dialog box.

Figure 34 VNC Authentication dialog box

6. Type the password of the thin client (the desktop that is to be operated/monitored) into the Session password text field and click **OK**.

   The thin client desktop (the desktop that is to be operated/monitored) will be displayed in a separate window on the remote machine desktop (on which VNC Viewer is installed). Use the mouse and keyboard on the remote machine desktop (on which VNC Viewer is installed) to operate the thin client (the desktop that is to be operated/monitored) just as you would if you were operating it locally.

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Reference Guide

Wyse® Winterm™ 9 series
Based on Microsoft® Windows® XP Embedded
Issue: 063005

Written and published by:
Wyse Technology Inc., June 2005

Created using FrameMaker® and Acrobat®